

# **DO WE KNOW WHAT WORKS?**

## **A Systematic Review of Impact Evaluations of Social Programs in Latin America and the Caribbean**

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This working paper is being published with the sole objective of contributing to the debate on a topic of importance to the region, and to elicit comments and suggestions from interested parties. This paper has not gone through the Department's peer review process or undergone consideration by the SDS Management Team. As such, it does not reflect the official position of the Inter-American Development Bank. Comments are welcome.

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# Abstract

Poverty is a multidimensional phenomenon closely related with the low accumulation of human capital and scant economic opportunities for the poor. Government efforts to help households to overcome poverty require actions on multiple fronts. Although sustainable economic growth, macroeconomic stability and governance are essential ingredients for poverty reduction, they are not sufficient. *Specific actions* to boost capacity (assets), opportunities and risk management options for the poorest and most excluded groups are also required to promote greater equity and increase the impact of growth on poverty. The governments of the region, with the support of multilateral institutions such as the IDB, are making important efforts to scale up innovative programs to increase the capabilities and economic opportunities of the poor to ensure attaining the Millennium Development Goals.

Increasingly the implementation of these programs in Latin America and the Caribbean has been accompanied by significant efforts and resources to evaluate their impact and effectiveness. The implementation and evaluation of the portfolio of interventions to improve the capabilities and opportunities of the poor has produced useful lessons that have helped identify best practices to reduce poverty and inequality and promote MDG attainment. This document reviews these experiences placing emphasis on extracting lessons from projects and programs for which impact evaluations are available in order to rigorously assess the development effectiveness of these interventions. All evaluations included in the review have a control group and use the rigorous statistical methodologies (randomization or experimental design, propensity score matching, and instrumental variables) estimate the impact of the interventions. Using this criteria 51 studies from 47 social programs were included.

The paper analyzes the topics that usually arise from systematic reviews of development programs (specifically, poverty reduction programs) and initiates a discussion about them. These topics include (i) identifying general relationships and treatment effects through the synthesis of individual study results; (ii) finding reasons for conflicting evidence; (iii) answering questions, using variations in studies, that could not have been answered in the individual component studies; (iv) explaining variations in practice; (v) reviewing the evidence on the subjective experience of an intervention, and/or (vi) building connections between related areas of research.

While impact evaluations of similar projects in different countries (or regions) are not generally expected to yield the same results, the mounting evidence increasingly allows us to infer some important lessons to design and improve social programs in the region. The results presented in this review show a mostly positive picture of the average impact of the programs evaluated. Results of the evaluations have also proven to be useful, not only for measuring impacts, but also for identifying program weaknesses (e.g. problems with targeting mechanisms or groups that are not reaping the full benefits of the program) and induce the adjustments necessary to increase program effectiveness. The evaluation results and the experience in implementing these programs also raise various issues for the reform of social and fiscal policies in order to make public social expenditure more effective, pro-poor, and

fiscally sustainable. These issues include, among others, the need to design social programs as harmonious components of extreme poverty eradication policies and social protection systems, taking advantage of instrument complementary; take advantage of cash transfers and the need to include conditionality in program design; include strong components for beneficiary training and monitoring of beneficiary responses in some interventions; ensure an institutional environment that is conducive to program sustainability; go beyond increased access to improve the quality of services provided; respond to political and fiscal questioning of interventions with demonstrated cost effectiveness; and ensure cost-effective targeting.

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*Mr. Álvarez's eyes filled with tears when he explained that he could not afford to send Rigoberto to a secondary school; the nearest one then was two hours away. It is his second son, Alfonso, 12, who will go to the school in Patihuitz, a 45-minute walk away. Education, he says, is the only way to break the chain that binds his children to his mountainous plot of earth. "Otherwise we die, and the children stay here suffering," he said. "That's the end of it. There is no other step."*

Where Poverty Drove Zapatistas, the Living Is No Easier,  
By James C. McKinley Jr.  
New York Times, September 11, 2005

# I. INTRODUCTION

Poverty is a multidimensional phenomenon closely related with the low accumulation of human capital and scant economic opportunities for the poor. Government efforts to help households to overcome poverty require actions on multiple fronts. Although sustainable economic growth, macroeconomic stability and governance are essential ingredients for poverty reduction, they are not sufficient. *Specific actions* to boost capacity (assets), opportunities and risk management options for the poorest and most excluded groups are also required to promote greater equity and increase the impact of growth on poverty. In particular, it is necessary to offer productive opportunities; increase access by the poor to physical and social infrastructure; address structural inequalities in the distribution of assets (especially human capital); address social problems that have a disproportionate impact on the quality of life of the poor; eliminate social barriers that keep ethnic groups and women at a disadvantage; promote a more efficient, effective and inclusive State that is sensitive to the needs of the poor, recognizes their human rights and is more accountable; and establish comprehensive social protection systems.

These actions are urgently needed in Latin America and the Caribbean. Major political and institutional changes in recent decades have not resolved the wide differences in the distribution of assets between the high- and low- income population, different ethnic groups, men and women, urban and rural zones and/or more advanced and less advanced regions. Latin America and the Caribbean is the most unequal region in the world and this inequality is associated with significantly higher levels of poverty than would be expected given the region's per capita income. The governments of the region, with the support of multilateral institutions such as the IDB, are making important efforts to scale up innovative programs to increase the capabilities and economic opportunities of the poor to ensure attaining the Millennium Development Goals. Efforts to improve capabilities, include government support for investments to increase the human capital of the poor and their access to basic social and economic infrastructure by setting up conditional transfer programs and social investment funds; enacting reforms and creating programs to improve the delivery of basic health and education services to the poorest families, as well as early childhood interventions, training programs for poor workers and youth, and comprehensive urban development programs for marginalized neighborhoods, and making investments to increase access to water and sanitation in rural and urban marginalized areas. In the area of economic opportunities, governments have placed special emphasis on the creation of employment in times of crisis and improving the productivity of the poor through emergency employment programs, microfinance and micro enterprise programs.

Increasingly the implementation of social programs in Latin America and the Caribbean has been accompanied by significant efforts and resources to evaluate their impact and effectiveness. The implementation and evaluation of the portfolio of interventions to improve the capabilities and opportunities of the poor has produced useful lessons that have helped identify best practices to reduce poverty and inequality and promote MDG attainment. This document reviews these experiences placing emphasis on extracting lessons from projects and programs for which impact evaluations are available in order to rigorously assess the

development effectiveness of these interventions. Impact evaluations have proved their usefulness in ensuring the continuity of effective programs and in identifying the adjustments required in existing programs.

The aim of the paper is to analyze the topics that usually arise from systematic reviews of development programs (specifically, poverty reduction programs) and initiate a discussion about them. These topics include (i) identifying general relationships and treatment effects through the synthesis of individual study results; (ii) finding reasons for conflicting evidence; (iii) answering questions, using variations in studies, that could not have been answered in the individual component studies; (iv) explaining variations in practice; (v) reviewing the evidence on the subjective experience of an intervention, and/or (vi) building connections between related areas of research (see Centre for Reviews and Dissemination, 2001).

The paper is organized as follows, section II presents some basic considerations about the evaluation of social programs. Section III presents the methodology for the systematic review and the type of programs included in the study. Section IV and V review programs to increase the capabilities and opportunities of the poor respectively, and section VI concludes and summarizes the findings from the review.



## II. EVALUATING THE IMPACT OF SOCIAL PROGRAMS: CONCEPTS, METHODOLOGY AND COSTS

The main purpose of an impact evaluation is to measure the value added of a specific program. That is, we want to estimate the changes in certain outcome variables that are attributable to the program independently of other factors that may have simultaneously affected the selected outcome variable. In order to do this the evaluator would need to observe what the change in the outcome variable for a program participant or group of participants would be both with and without the program. In practice this is impossible to measure, and for this reason the evaluator is forced to find a valid comparison group against which to compare the changes in the outcome variables found in beneficiaries.

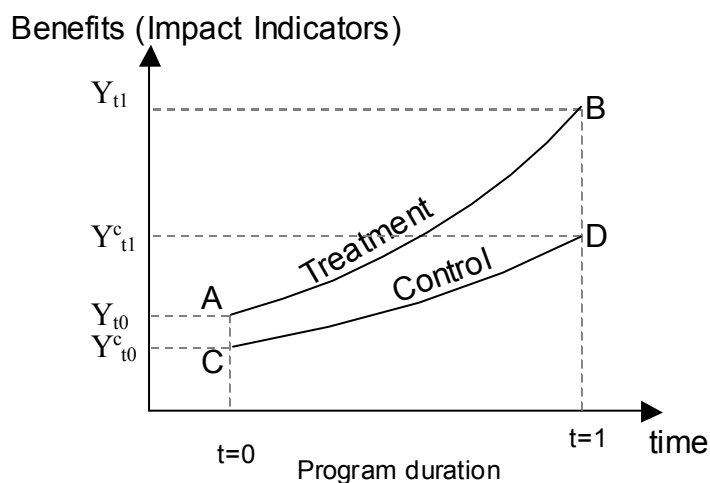
For example, let's say we want to measure the effect of a certain program on the outcome variable  $Y$ . A naïve approach would be to compare the value of the outcome variable  $Y$  before and after implementation of the program. This is equivalent to finding the value  $Y_{t1}-Y_{t0}$  in figure 1. This approach is called a *reflexive comparison*. Its main problem is that it attributes the change in the outcome variable to participation in the program and fails to take into account other factors such as macroeconomic conditions, natural disasters, or other interventions and covariate shocks that may have affected  $Y$  at the same time. One can improve upon this estimate by directly comparing values of  $Y$  for participants with those of a group of non participants with similar characteristics (called the control group) after the program, which is equivalent to calculating  $Y_{t1}-Y^c_{t1}$  in figure 1. However that approach fails to take into account differences in the initial conditions of both groups, which could generate biases in the measured effects of the program. Depending on data availability, it is possible to improve upon the previously mentioned indicators by comparing changes in the outcome variable before and after the program between participants and non participants, this is known as the *difference in difference estimator* given by  $(Y_{t1}-Y_{t0})-(Y^c_{t1}-Y^c_{t0})$  in figure 1.

The strength of the last two approaches depends on finding a *valid* control group, since differences in observable and unobservable characteristics between the treatment and comparison groups may cause biases in the estimation of the impact of the program.<sup>1</sup> A valid control group is one that resembles as closely as possible the ex-ante characteristics (both observable and unobservable) of the treatment group. A broad range of methodologies for solving these problems exists today, such as *randomization*, *propensity score matching* and *instrumental variables* depending on the nature of the project and the data available.

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<sup>1</sup> For example if one wants to evaluate a micro credit program there may be unobserved characteristics such as entrepreneurial talent, ability to keep books, or family connections that may cause people who would do better even in the absence of the program to choose to participate in the program. In this case one could overestimate the effects of the program by comparing participants against a group with similar observed characteristics but lower levels of the mentioned unobserved characteristics.

**Figure 1**  
**Measuring Intervention Impacts on Program Beneficiaries**



Under *randomization* or *experimental design*, beneficiaries of a program are selected randomly from a pool of eligible participants. Since observable or unobservable characteristics played no role in the selection of beneficiaries (besides the characteristics that qualify them as eligible for the program), it is expected that on average there will be no difference in these characteristics between control and treatment groups. This method is considered the golden standard for impact evaluations; however, since it requires a very strong commitment to the evaluation on the part of the program executor it is only rarely seen in practice.

*Propensity score matching* is a methodology designed to match program beneficiaries with a control group of individuals with similar observed characteristics. It improves over the simpler approach of matching two individuals, one participant and one non participant based on many dimensions (i.e. similar education, age, income, geographic location, etc.) by condensing them into one measure given by the probability that the individual will be a participant into the program. The beneficiary is then compared to a non beneficiary (or group of beneficiaries) with a similar probability of participating in the program. Using this methodology it is expected that the bias caused by differences in unobserved characteristics will also be eliminated (that is, it is assumed that people with similar observed characteristics will have similar unobserved characteristics).

The method of *instrumental variables* also tries to control for differences in characteristics that may have caused selection into the program. The idea behind this method is to find an exogenous source of variation in the participation variable; that is, one exogenous variable that may influence participation in the program but not the outcome variable in a direct

manner. For example being closer to a program office might influence participation in the program but not the actual effect that the program has on the outcome variable given participation. In practice, the analyst must use the instrumental variable to predict the participation variable and then use the predicted value instead of the original participation variable to measure the effect of the program.

All the evaluations reviewed in this paper include a control group and use the methodologies mentioned above or variations of them in order to solve the biases generated by the differences in observed and unobserved characteristics between the treatment and control groups.

### III. SYSTEMATIC REVIEW METHODOLOGY

A systematic review, as defined by the Centre for Reviews and Dissemination is “[a] review of the evidence on a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant primary research, and to extract and analyze data from the studies that are included in the review.” Under this definition, the systematic review is a step over a regular review in the sense that it uses an explicit methodology to select and appraise primary research, but it does not go as far as a meta-analysis of studies because it does not employ any statistical techniques to construct a summary measure to answer a particular question.

In analyzing the relevance of a systematic review of results from impact evaluations of social programs, we made an effort to look for previous work done in this area. Systematic reviews of the type presented in this study have been made for special categories of projects such as conditional cash transfers (see Rawlings, 2003) and social investment funds (see Rawlings, 2004). Moreover, databases of impact evaluations have been collected for all types of social projects by the World Bank<sup>2</sup> and for social projects related to labor markets by the International Labor Organization.<sup>3</sup> An additional source of impact evaluations is the International Food Policy Research Institute ([www.ifpri.org](http://www.ifpri.org)), which performed many of the evaluations listed in this paper, and the Office of Evaluation and Oversight of the Inter-American Development Bank.<sup>4</sup> Additional studies were collected from the agendas of the yearly meetings of the Latin American and Caribbean Economic Association (LACEA) (<http://www.lacea.org/>). Internet searches for each topic were also carried out. Many of the raw databases and questionnaires used for the evaluations included in the review can be accessed online.

The aim of this systematic review is to collect a sample of impact evaluations performed in the region by accessing all of the sources cited above, and complementing the evaluation search by canvassing the bibliographies of the main studies. The problem of biases generated by language barriers was minimal because of the regional nature of the review. The selection criteria for the studies included that the evaluations have a control group and use the statistical methodologies described in section II (randomization or experimental design, propensity score matching, and instrumental variables) or variations of them in order to solve the biases generated by the differences in observed and unobserved characteristics between the treatment and control groups. It is important to note that the results of the review may be affected by two potential biases, the first related to the omission of programs with unfavorable results that are not disseminated by program directors and governments and the second related to the omission of social programs with serious deficiencies in implementation or in their production of outputs, for which an impact evaluation was planned but never undertaken (see Pritchett,

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<sup>2</sup> The database can be accessed at:

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTISPMA/0,,menuPK:384336~pagePK:149018~piPK:149093~theSitePK:384329,00.html>

<sup>3</sup> <http://www.cinterfor.org.uy/public/spanish/region/ampro/cinterfor/temas/youth/eval/index.htm>

<sup>4</sup> Visit: <http://www.iadb.org/ove/DefaultNoCache.aspx?Action=WUCPublications@ImpactEvaluations>

2003). With these caveats, the final pool of evaluations includes 51 studies from 47 social programs<sup>5</sup>. These programs were then classified by type of program (11 categories) and by overarching objective (programs to enhance the capabilities of the poor and programs to enhance the economic opportunities of the poor). Box 1 presents a summary of the programs and categories considered. Annex 1 lists the evaluations included by country, type of project, data used and methodology.

### Box 1: Programs Evaluated by Type of Intervention

<b>Programs to Increase the Capabilities of the Poor</b>	
• Conditional transfers (9 programs in 7 countries)	Brazil: <i>Bolsa Alimentação</i> , <i>Bolsa Escola</i> and <i>PETI</i> ; Colombia: <i>Familias en Acción</i> ; Costa Rica: <i>Superémonos</i> ; Ecuador: <i>Bono Solidario</i> ; Honduras: <i>PRAF</i> ; Mexico: <i>PROGRESA/Oportunidades</i> , and Nicaragua: <i>Red de Protección Social</i>
• Early childhood development programs (4 programs in 3 countries)	Bolivia: <i>PIDI</i> ; Guatemala: <i>Instituto de Nutrición de Centro América y Panamá</i> program and <i>Hogares Comunitarios</i> , and Colombia: <i>Hogares Comunitarios de Bienestar Familiar</i>
• Social investment funds (5 programs in 5 countries)	Bolivia: <i>Social Investment Fund-FIS</i> ; Honduras: <i>Honduran Social Investment Fund-FHIS</i> ; Nicaragua: <i>Emergency Social Investment Fund-FISE</i> ; Panama: <i>Fondo de Inversión Social –FIS</i> , and Peru: <i>Compensation and Social Development Fund-FONCODES</i>
• Health (2 programs in 1 country)	Peru: <i>Maternal and child health insurance</i> and <i>Expansion of Primary Health Service Infrastructure</i>
• Education (5 programs in 4 countries)	Argentina: <i>National Student Grants Program PNBE</i> and <i>Program for the Expansion of Preschool Infrastructure</i> ; Brazil: <i>FUNDEF</i> ; Colombia: <i>PACES</i> , and Mexico: <i>CONAFE</i>
• Training programs for the unskilled youth (3 programs in 3 countries)	Argentina: <i>Proyecto Joven</i> ; Chile: <i>Chile Joven</i> , and Peru: <i>ProJoven</i>
• Comprehensive urban development programs (1 program in 1 country)	Brazil: <i>Favela Barrio</i>
• Water and sanitation programs (4 programs in 4 countries)	Quito: <i>Water and Sewerage Expansion Project</i> . <i>Privatization of water services</i> in Argentina, Brazil and Bolivia
<b>Programs to Increase the Economic Opportunities of the Poor</b>	
• Active labor market programs (5 programs in 4 countries)	Argentina: <i>Trabajar</i> and <i>Jefes y Jefas</i> ; Colombia: <i>Empleo en Acción</i> ; Mexico: <i>PROBECAT/SICAT</i> , and Peru: <i>A Trabajar Urbano</i>
• Microfinance and support to micro enterprises (2 programs in 2 countries)	Bolivia: <i>CRECER</i> , and Peru: <i>Mibanco</i> and <i>Promuc</i> . Aggregate impact of microfinance in Chile and Brazil.
• Training programs for small and medium enterprises (1 program in 1 country)	Mexico: <i>CIMO</i>
• Land titling (3 programs in 3 countries)	Land titling programs in Argentina, Nicaragua and Ecuador

<sup>5</sup> For the PROGRESA/OPORTUNIDADES program there are several additional impact evaluations that were not listed in this study; however, their conclusions were included as part of the more comprehensive reports that were used.

## IV. SCALING UP PROGRAMS TO INCREASE THE CAPABILITIES OF THE POOR

This section reviews a set of programs intended to improve the capacity (asset base) of the poor, focusing on conditional transfers, early childhood development, social investment funds, and health and education programs, among others. Given that labor is the main productive factor of the poor, a critical element in the fight against poverty and inequality is strengthening investments in human capital, from early childhood through adulthood. Access to quality education and health services should be a chief priority of social policy and reform agendas. It is essential that social policies and programs *go beyond average indicators* of access to services, and monitor to what extent the poor are reaching those education and health goals.

Social spending has increased substantially in the region during the last 15 years. This has been accompanied by a substantial increase in the number and resources geared toward social assistance programs. ECLAC data show that social spending as a percentage of GDP rose from 12.8 in 1990-1991 to 15.1 percent in 2002-2003. The increase was concentrated in spending on education (which rose to 4.1 percent of GDP in 2002-2003, an absolute increase of 0.8 percentage points with respect to 1990-1991) and social security and social assistance (which rose to 7.1 percent of GDP in 2002-2003, an absolute increase of 1.9 percentage points with respect to 1990-1991). Health and other types of social spending decreased slightly (reaching 2.9 and 0.9 percent of GDP in 2002-2003, respectively). Unfortunately these averages hide a strong disparity among the countries of the region. Spending varies from around 20 percent of GDP in Argentina, Brazil and Uruguay, to less than 7 percent of GDP in Ecuador, Guatemala and Trinidad and Tobago. Public social spending in nine countries is less than 10 percent of GDP.

Efforts have to be made to improve the effectiveness and progressivity of the increased public social spending and, in many countries, its insufficient level. According to ECLAC, only spending on primary education and social assistance are clearly progressive in the region. Public spending on tertiary education follows closely the distribution of income. With the exception of Argentina, Brazil and Costa Rica (which direct a large portion of GDP to public social spending), most social spending in the region has low redistributive impact due to its insufficient level and lack of targeting. Scaling up well targeted programs is key to improving the distributive impact of spending.

Increased social spending has contributed to reducing poverty in the region. The total poverty incidence decreased from 48.3 to 40.6 percent, while extreme poverty declined from 22.5 to 16.8 percent between 1990 and 2005 (according to ECLAC projections). Even though this progress is encouraging, it is still below what would be required to meet the poverty MDG.

Increased social spending on education has contributed to significant progress toward achieving universal primary education enrollment, but progress in completing five years of primary education has been slower, and few countries can boast universal net enrollment for

the entire primary cycle. By 2001, only 12 out of 29 countries in the region had rates of fifth grade completion higher than 90 percent, and 10 had rates below 80 percent (ECLAC, 2005). In many countries, only a third or less of children of secondary school age actually enroll in secondary school. Levels fall precipitously in rural areas, rarely exceeding 10 percent. Despite steady increases in academic achievement, a third or less of the urban workforce has completed the 12 years of schooling deemed necessary to guarantee a decent standard of living and keep pace with the demands and challenges of an increasingly global economy. It is important to note also that national averages hide drastic disparities among the poor and non poor. The IDB's EQxIS system of social indicators, which provides estimates based on recent household survey data (circa 2004), shows that the illiteracy rate of the 15 to 24-year-old population, considering a functional definition of this indicator (whether a person has completed 5 or more years of schooling), is nearly 12 percent. However, there is a marked difference in this indicator between the poorest (25 percent illiteracy) and richest (3 percent illiteracy) quintiles of the population.<sup>6</sup> Likewise, while the net attendance ratio for secondary education is estimated at 69 percent, the figure among the poorest quintile is 52 percent compared to 86 percent for the richest quintile (table 1).

It is important to note also that equity gaps in education in the region go beyond access. Poor children have weaker academic performance and lower skills because of the inferior quality of the education they receive at school and the low educational background of their parents, which affects what they learn at home. Indicators on repetition rates for the poor are substantially worse than the population average. Thus, students from poor families have a harder time finishing primary school, and their learning levels put them at a clear disadvantage to access and complete secondary school or go on to higher education. The inadequate quality of instruction, its limited relevance to the work place, and its unsuitability to a culturally diverse population become core obstacles that prevent the poor from accruing any of the high returns of quality education or better employment opportunities, severely limiting the potential contribution of education to social mobility in many of the region's countries.

Increased spending has also contributed to reduce malnutrition. According to ECLAC, the percentage of Latin American and Caribbean children under 5 years of age who are underweight declined from 10.3 to 7.2 percent between 1990 and 2002. This rate of improvement surpassed the progress required to achieve the Millennium Development Goal of reducing this indicator to 5.2 percent by 2015. However, these aggregate figures hide the region's heterogeneity. The undernourished population ranges from around 2 percent in Argentina to almost 50 percent in Haiti. Poor nutrition during the fetal stage retards growth and increases infant mortality. Since catch-up potential after age 2 is limited, malnourished children have weaker cognitive skills that, in turn, minimize their prospects for human capital accumulation and their productivity as adults.

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<sup>6</sup> EQxIS is the *System of Information of Social Indicators and Equity*, accessible from [www.iadb.org/xindicadores](http://www.iadb.org/xindicadores).

Table 1. Selected Social Indicators (circa 2004)  
Latin America and the Caribbean <sup>(1)</sup>

Latin America and the Caribbean			
SECTOR / Indicators	Average <sup>(2)</sup>	Population quintiles <sup>(3)</sup>	
		Poorest 20%	Richest 20%
EDUCATION			
Net attendance ratio in primary education (%)	91.2	88.8	93.0
Net attendance ratio in secondary education (%)	68.5	52.4	86.0
Literacy rate of 15-24-year-olds <sup>(4)</sup> (%)	88.4	75.4	97.4
HOUSING			
% of population using solid fuels	16.5	41.7	2.2
% of pop. with sustainable access to an improved water source	92.5	83.3	98.3
% of population with access to improved sanitation facilities	71.7	46.1	92.3
% of population with access to secure tenure	65.7	39.7	87.8
EMPLOYMENT			
Unemployment rate of 15-24 year-olds (%)	17.4	25.6	10.7
Share of women in wage employ. in the non-agric. sector <sup>(5)</sup> (%)	38.0	28.0	45.6
INFORMATION AND COMMUNICATION			
Personal computers in use per 100 population	15.0	1.6	44.4
Internet users per 100 population	8.2	0.6	28.9
Telephone lines and cellular subscribers per 100 population	56.7	24.1	88.0

<sup>(1)</sup> Includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. Representing approximately

<sup>(2)</sup> Average weighted by

<sup>(3)</sup> Average of national quintiles weighted by

<sup>(4)</sup> 5 or more years of schooling

<sup>(5)</sup> Excludes domestic

**Source** IDB. EQxIS, "Sistema de Información de Equidad e Indicadores Sociales" Poverty and Inequality Unit, MECOVI. Accessed from [www.iadb.org/xindicators](http://www.iadb.org/xindicators) on February 1,

Health indicators for the countries of Latin America and the Caribbean remain at critical levels, especially those that can be improved or controlled through public health measures, such as efforts to reduce infant mortality among the poor and indigenous children living in rural areas, as well as efforts to reduce maternal mortality and transmissible diseases. Even though most countries in the region have made substantial progress in reducing infant mortality, high heterogeneity persists across them and across sub national regions and income and ethnic groups. While countries like Uruguay and Costa Rica achieved infant mortality rates below 15 deaths per 1,000 live births, Haiti and Bolivia have rates above 50 per 1,000 live births (PAHO, 2005). Infants born into the poorest families, those born in rural areas and those from indigenous descent also show mortality rates significantly higher than non poor infants and those born in urban areas or who are of non indigenous descent. For example, mortality rates for infants born in the poorest income quintile of Bolivia are more than four times those of infants born in the richest quintile; mortality rates for infants born in rural Peru are twice as high as those for infants born in urban areas; and mortality rates for indigenous infants born in rural Bolivia are twice those of non indigenous babies born in urban areas (ECLAC, 2005). The most recent data show an average maternal mortality rate of approximately 95 deaths per 100,000 live births in the region (PAHO, 2005). This is considered high given the average per capita income levels of the region's countries. Rates



vary substantially, from less than 15 deaths per 100,000 births in Chile to more than 200 in Bolivia and Haiti.

As seen, spending and programs should place more emphasis on improving the transition and successful completion of secondary schooling, as well as providing the poor with more access to post-secondary schooling. There is solid empirical evidence indicating that education is a key area where public policy has the most potential to play a significant role in reducing poverty and inequality (see Bourgignon, Ferreira and Lustig, 2005 and IDB, 1998). The ability of the poor to invest in education is limited because of insufficient and inadequate supply, insufficient savings, child labor, and/or because of credit market constraints. Returns to education in the region have been increasing greatly, reflecting the stronger demand for workers with post-secondary schooling. This has worsened inequality in labor income and has strengthened the need to have access to post-secondary schooling to overcome poverty. Programs should also focus on improving child health and nutrition and reducing maternal mortality, especially in the poorest areas. Human potential and skills are developed largely in early childhood and are significantly affected by the learning environment at home, at school and in the local community.

The rest of this section presents results for a sample of programs focused on these objectives, among others, with lessons for its dissemination and scaling up throughout the region. Most of the programs reviewed focus on improving the infrastructure of public services or the demand for human capital accumulation for the poor. More supply-side interventions with adequate impact evaluations are needed to address supply-side deficiencies in the provision of the services.

### **Conditional Transfer Programs**

As seen, there were great advances in the region in the areas of education and health during the 1990s. However, significant gaps between income and ethnic groups and geographical areas persist and the need to address them is still of great importance. Conditional transfer programs that provide incentives for families to invest in the human capital of their children have been implemented in 13 countries: Argentina (Plan Familias), Brazil (Bolsa Familia), Chile (Chile Solidario), Colombia (Familias en Acción), Costa Rica (Supermonos), the Dominican Republic (Solidaridad), Ecuador (Bono de Desarrollo Humano), Honduras (PRAF), Jamaica (PATH), Mexico (PROGRESA/Oportunidades), Nicaragua (Red de Protección Social), Peru (Juntos) and El Salvador (Red Solidaria). The largest programs are Plan Familias in Argentina, Bolsa Familia in Brazil, and Oportunidades in Mexico, which together benefit more than 14 million poor families.

Conditional cash transfer programs began a decade ago with the Bolsa Escola program in the outskirts of Brasilia. In 2003, the Brazilian government began the consolidation of many of its cash transfer programs that included conditionality on participant behavior (Bolsa Escola, Bolsa Alimentacao, and PETI, among others) into one conditional cash transfer program called Bolsa Familia, which currently benefits around 8.7 million families. The first Bolsa Escola programs were implemented at the municipal level in 1995, and then at the federal

level in 2001 (see Cardoso and Portela Souza, 2003). The program transferred R\$15 (approx US\$6.3) per child per month for each child between the ages of 6 and 15 years (for up to 3 children per household) conditional on school attendance. By 2002 there were approximately 5.6 million households that were beneficiaries of the program. Bolsa Alimentacao provides cash transfers to families with pregnant mothers or with children up to 6 years old. The transfer is conditional. Beneficiaries must make a commitment to meet certain requirements, such as attending prenatal care, growth monitoring, vaccinations and health and nutrition education. The program benefited approximately 800,000 mothers and 2,700,000 children in 2002 (see Olinto, et al. 2004). The PETI program, which started in 1996, provides cash transfers to families with children between the ages of 7 and 14. The condition for the transfers that children attend 80 percent of the required number of hours of school and after school programs. By 1999 the program provided assistance to more than 131,000 children.

PROGRESA/Oportunidades, the second largest conditional cash transfer program in the region, began in 1997 in Mexico. It takes a comprehensive approach to combating the different causes of poverty by fostering interventions in the areas of health, education and nutrition. At the beginning of 2000, the program covered close to 2.6 million families in 72,345 localities in the country's 31 states. That number accounts for about 40 percent of rural families and one ninth of all Mexican families (see Caldés et al., 2004). In 2004, the figure was around 5 million families with a total annual budget of about US\$2.5 billion, equivalent to 0.4 percent of GDP.

Although there are variants from country to country regarding specific objectives, components and implementation, what all these programs have in common is that they provide subsidies to poor families (in most cases in the form of monetary allowances) contingent on a particular behavior (generally investments in human capital, such as sending their children to school or taking them to health centers at given intervals). The immediate objective of these programs is to increase food consumption, school attendance and preventive health care among the poor and extremely poor. The expected long-term impacts of the interventions include reducing poverty and malnutrition and improving school completion rates. This would result in the accumulation of human capital (measured through increases in educational attainment and declines in mortality and morbidity) and associated eventual improvements in returns in labor markets and the productivity of the economy as a whole.

Conditional transfer programs are part of a new generation of programs that center on giving greater decision-making power to the poor through the application of market mechanisms. These new programs intervene on the demand side by providing direct support to the beneficiaries, in contrast to traditional supply-side mechanisms such as general subsidies or investments in schools, health centers and other providers of social services. The emphasis on human capital accumulation is one of the distinguishing features of conditional transfer programs. Another feature is that they attach priority to children and youths. As such, these programs are part of a broader approach developed in the last decade, which centers on promoting the accumulation of human capital in future generations as a means of breaking the vicious circle of poverty.

**Table 2**  
**Summary of Cash Transfer Programs Evaluated**

<b>Country</b>	<b>Program</b>	<b>Year of inception</b>	<b>Budget (mill US\$ year)</b>	<b>Beneficiaries</b>	<b>Average Transfer (in US\$ per month)</b>	<b>Period Covered by Evaluation</b>
Brazil	Bolsa Familia (Bolsa Alimentacao, Bolsa Escola, and PETI)	1995	2,000	8.7 million families	6.3 - 18.7 (per beneficiary household – Bolsa Escola) 11 - 17 (per child - PETI)	2002
Colombia	Familias en Acción	2000	95	400 thousand families	5 - 17 (per household)	2002-2003
Ecuador	Bono Solidario	1998	127.6 (0.9% GDP)	1.15 million families	15.1 (per mother)	1988-1999
Honduras	PRAF II	1998			18 (per capita per year)	2000-2002
Nicaragua	Red de Protección Social	2000	7.3	22.5 thousand families	30 (per household)	2000-2002
Costa Rica	Supermonos	2000-2001	3.4	12.2 thousand families	30 (per household)	2002
Mexico	PROGRESA/Oportunidades	1997	2,500 (0.4% GDP)	5 million families	55 (per household)	1997-2000

These new interventions are assumed to be more efficient and effective than in-kind transfer programs or price subsidies. In terms of efficiency, they have lower transaction costs; are able to rectify imbalances in information (since the families know more about their own needs than the government does); and they achieve multiple objectives such as improvements in health, nutrition and education using a single instrument (money). Their focus on the poor is sharper than general subsidies or infrastructure investments because they make fewer errors of inclusion and are flexible in allowing the levels of transfers to be modified over time and between population groups. In terms of effectiveness, conditional transfer programs place decisions in the hands of the beneficiary families, making them equally responsible for making the necessary changes. Conditional transfers create a safety net in times of crisis and, in times of stability and growth, are able to achieve positive and significant impacts on the welfare of beneficiaries (particularly in the areas of health and education) and have a multiplier effect on local communities.

### *Designing Conditional Transfer Programs: The Experience of PROGRESA/Oportunidades*

PROGRESA/Oportunidades has three components: education, health and nutrition. The education component is designed to increase the school attendance of children from the poorest rural communities by providing support for mothers who make a commitment to send their children to school. In the localities where the program operates, households classified as poor with children who attend school from grade three to grade nine (that is, to the third year of secondary school) are eligible to receive financial support every two months. The level of support is determined by taking into account what a child would earn by working or contributing to family production, among other factors.<sup>7</sup> The educational support provided is slightly higher for girls who attend secondary school, given their high propensity to leave school at an early age. Every two months, the teachers and principals of the schools provide the PROGRESA/Oportunidades program an attendance report for beneficiary children. Most conditional cash transfer programs follow the PROGRESA/Oportunidades design, but, as seen below, some changes in the program components imply changes in its effects.

One key factor in the success of this program is that the cash transfers are given to the mothers. The reason for this is that, it has been found that when mothers have control over money there is a higher probability that it will be spent on improving the welfare of the children. PROGRESA/Oportunidades also provides basic health care through different free programs, either by providing dietary supplements, courses on hygiene and nutrition or money to buy food. The cash transfers and dietary supplements are conditional on the beneficiaries receiving care in public clinics. This area of the program seeks to target children under five, pregnant women and women with newborns. It is supported by the Department of Health and IMSS-Solidarity, which is a subdivision of the Mexican Social Insurance Administration (IMSS) that covers uninsured people in rural areas.

The dietary supplements are given to children between four months and two years of age and to pregnant women and women with newborns. Where there is evidence of malnutrition among children between the ages of 2 and 5, food supplements are delivered to the home. The nutritional status of the beneficiaries is monitored through compulsory visits to health clinics where they are measured and weighed (children under five and pregnant and lactating women are monitored most frequently). The appointments and medical consultations take place periodically and a doctor or nurse checks attendance and adherence to the program. Every two months a certificate stating that the beneficiary kept the appointments is submitted by the physician to PROGRESA/Oportunidades and the cash transfer to buy food is paid.

### *Development Effectiveness and Lessons for Scaling Up Conditional Cash Transfers*

Evaluations of the impacts of these programs show that they can be very effective tools for reducing poverty and inequality in the long term and for alleviating poverty in the short term. For example, the various evaluations and studies of the PROGRESA/Oportunidades program, one of the pioneer conditional cash transfer program in the world, show that it has had a substantial positive long-term impact on the education, nutrition and health of its

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<sup>7</sup> For a detailed description of Progres/Oportunidades See Levy, S and Rodriguez, E. (2004).

beneficiaries, especially children, and has alleviated extreme poverty in the short run<sup>8</sup> (see Levy and Rodriguez, 2004; Rawlings and Rubio, 2003; and Skoufias and McClafferty, 2001, among others). The impacts of the program are sustained and increased with greater exposure to the interventions.

Important lessons for future design and improvement of the programs may be learned from the increasing number of impact evaluations available. However, it is important to note that the programs reviewed in this section have some differences in their design, especially in terms of the education transfer. Mexico's PROGRESA/Oportunidades has an increasing transfer according to school grade that is differentiated across genders, while Colombia's Familias en Acción (see Econometría Consultores, 2004) has a differentiated transfer for the primary and secondary cycles (14,000 vs. 28,000 Colombian pesos, respectively). Both programs have a cap on the number of children that can receive support. Nicaragua's Red de Protección Social has a flat education subsidy per family independent of the number of children, grade in which they are enrolled or gender (see IFPRI, 2004). More importantly, estimates of the transfer per child or per family varies significantly from one program to the other, and there seems to be no specific methodology for how it is established. Theoretically, the amount of the transfer should be enough to cover the opportunity cost of the child in the labor market versus going to school, while the nutrition and health components should be sufficient to enable increased food consumption to decrease malnutrition and stunting. These two considerations should be weighed against the objective of covering the maximum number of families in need under usually tight fiscal constraints.

One of the lessons of the first phase of the PROGRESA/Oportunidades program is that, even though it was successful in increasing the number of children who transition to secondary schooling, after the program benefits ended in the third grade of secondary schooling there was a sharp decrease in continuation rates in both PROGRESA/Oportunidades and in control villages. Continuation rates declined from 100 percent in the third grade to around 43 percent in the fourth grade (see de Janvry and Sadoulet, 2004). The second phase of the program, which started in 2002, expanded benefits to all secondary grades as well as to urban areas.

The unsatisfactory results of the impact evaluation of the PRAF program in Honduras highlight the importance of having adequate levels of transfer to significantly improve food consumption and nutrition. The PRAF transfer was only US\$18 per capita per year, or 3.6 percent of the total annual expenditures of the targeted population. In comparison, transfers under Mexico's PROGRESA/Oportunidades program are equivalent to around 20 of total annual family expenditures (see IFPRI, 2003), and Colombia's Familias en Acción transfers 17.7 percent in rural areas and 13.4 in urban areas (see Econometría Consultores, 2004). The PRAF evaluation also highlights the importance of complementary supply-side interventions<sup>9</sup> for this type of programs. Part of the lackluster impacts of PRAF transfers may be attributed to the inadequate supply of health and education services. PRAF contemplated a strong component for supply-side interventions to accompany the cash transfers, the design of the

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<sup>8</sup> For a summary of the impact evaluation results of Conditional Transfer Programs please see annex 2.

<sup>9</sup> Filmer, D. (2004) also discusses the synergies between supply- and demand-side interventions.

impact evaluation took this component into account to measure the differential impacts of demand and supply interventions as well as their synergies (see Glewwe and Olinto, 2004).

Unfortunately, the implementation of PRAF's supply-side component was unsuccessful. In terms of health, only 17 percent of the planned transfers to health provided materialized and only 11 to 22 percent of a component for providing comprehensive health care for children was implemented. On the education side, 74 percent of the teacher training component was implemented, but only 7 percent of the cash transfers to schools were actually made and parents associations were not put in place in the participating schools. These poor results reduced the impact of the demand-side interventions and demonstrate the importance of taking into account institutional shortcomings in line ministers when designing this type of programs. In the case of Mexico, the supply-side complement of the PROGRESA/Oportunidades program has not been carefully analyzed or incorporated into the evaluation. However, anecdotal evidence suggests a strong supply-side response to the increase demand for public services generated by the program.

Evaluations of the effect on child labor tend to show that for the cash transfer and educational conditionality of the interventions to have a significant impact, they require complementary activities such as after-school programs. This is apparent in the impact evaluations of Mexico's PROGRESA/Oportunidades program and Brazil's PETI program (see Orazem, Sedlacek and Yap, 2002; and Pianto and Soares, 2004). In the case of other programs without these components, such as Supermonos in Costa Rica, the impact is much lower (see Duryea and Morrison, 2004). The programs show little negative effects on the labor force participation of adults in beneficiary households. In the case of Colombia, for example, household income increased in direct proportion to the transfers, this in a context of decreased hours worked by children and lower labor force participation rates by children in rural areas.

Finally, a key research and evaluation question that needs to be answered about these interventions is their cost effectiveness with regard to other programs, especially transfer programs with more emphasis on productive investments and unconditional transfers. In most cases, it is believed that conditional transfers have stronger development impacts than alternative social programs such as unconditional cash transfers, in-kind transfers and food price or energy subsidies. Conditionality comes at a cost because of the need to monitor the actions of the recipient population. Additionally, conditions may lead to limited responses by recipients and even unintended consequences. Even if conditions alter recipient behavior in a positive manner, the question remains of which are the "best" conditions to place on recipients (taking into account the particular objectives of the transfer scheme, as well as assumptions about the best ways to meet those objectives and the predicted response of recipients).

An evaluation of the first stage of the Bono Solidario program in Ecuador (see León and Younger, 2004) shows that an unconditional cash transfer had an impact of around 11 percent of monthly household expenditures for program beneficiaries in 1999 (similar to the PROGRESA/Oportunidades nutrition component). The program was widespread in Ecuador, covering 45 percent of households at a cost of around 1 percent of GDP. The evaluation

shows that the Bono had a small statistically significant effect on height-for-age (no different than the pure income effect of the transfer). In contrast, PROGRESA/Oportunidades shows a much higher effect on height-for-age (around six times higher). Even if the total transfer of the Bono equaled the transfer of PROGRESA/Oportunidades (including the education component), the effect would still be less than one-third that of PROGRESA/Oportunidades. The results for this specific case show the value added of conditionality to increase the desired impacts of cash transfers.

Another study that evaluates the relative effectiveness of conditional transfers compares the effects of PROGRESA/Oportunidades on poverty, consumption and investment to those of Mexico's Procampo program (see Davis et al., 2002). The latter program is a cash transfer conditional on land use in Mexico. The analysis of Procampo allows places the focus on the effects of transfers on the shorter-term productive capacity of recipient households by using transfers to encourage investment. One argument for this approach is that productive investments may lead to higher income in the medium term and reduce poverty more quickly than long-term investment in human capital. The results of the analysis suggest that both programs boost total expenditures on consumption and food and yield no evident differences between the two programs for these outcomes. This is an important result: two cash transfer programs, with different conditionality requirements have the same impact on total short-run household welfare. In terms of human capital investment, the study shows that Procampo households have significantly lower outcomes than PROGRESA households (school enrolment rates for Procampo households are approximately 6 percentage points lower for children between the ages 10 and 15). On the other hand, Procampo leads to a significant increase in agricultural spending relative to PROGRESA. While this is a positive result, it is not clear if Procampo conditionality leads to overinvestment in agricultural production. PROGRESA leads to a significant increase in nonagricultural investment, but not nearly to the degree that Procampo increases productive spending. These results suggest that tying transfers to schooling and health outcomes leads to greater investment for long-term gains, while tying them to productive assets appears to enhance investment for medium-term benefits. An alternative to conditionality for promoting productive investment may be complementary actions that improve business climate and productive opportunities. Even without conditionality related to productive activity, PROGRESA/Oportunidades has led to an increase in nonagricultural investment. This effect may be enhanced if investment conditions are improved.

### **Early Childhood Development Programs**

Human potential and skills are largely developed in early childhood and are significantly affected by the learning environment at home, at school and in the local community. Early childhood development programs have been present in the region for decades. By using longitudinal data with information for beneficiaries decades after the initial treatment, a series of recent evaluations has made it possible to measure the impact that these programs are having even into adulthood. Evaluations of this type of program are available for the PIDI program in Bolivia, the Hogares Comunitarios de Bienestar Familiar program in Colombia,

and two programs in Guatemala, a nutritional intervention in four villages from the late 1960s and the Hogares Comunitarios program.

**Table 3**  
**Summary of the Early Childhood Development Programs Evaluated**

Country	Program	Year of inception	Budget Monthly (US\$ mill)	Fee (US\$)	Beneficiaries (community households)	Period Covered by Evaluation	Daily Cost per beneficiary
Bolivia	PIDI	1992				1995-98	2.15
Colombia	Hogares Comunitarios	1984-86	250 (0.2% of GDP)	4	80,000	2002-03	0.58
Guatemala	Hogares Comunitarios	1991		5	1,200	1998	1.38
Guatemala	Dietary Supplement Program	1969				1969-2004	

The PIDI program in Bolivia provides nutritional and educational services to families with children between the ages of 6 and 72 months who live in poor predominantly urban areas (see Behrman et al., 2004). A pilot stage of the program began operations in 1992. It was put into full operation in mid-1994 with support from the World Bank, the World Food Programme, UNICEF and the European Community, among other sources. The Inter-American Development Bank began supporting the program in 1997 by means of a US\$20 million loan. The program grants of up to US\$500 to women who live in poor areas to upgrade their home so that they can serve as full-time daycare centers. It also provides child care training to the women. The estimated cost of the program is US\$43 per person per month. This is one of the few cases in which the evaluation measured treatment as a binary variable as well as a continuous one. Thus, it was possible to estimate the marginal effects on the beneficiaries of an additional month of treatment. While there is no formal discussion of the targeting of the program, mean household per capita income of participants is US\$185 while the urban poverty line stood at US\$309 in 1997.

The effects of the program on test scores are positive for children between 37 and 58 months old, who evinced an increase of 3 to 4 percent in test scores (anthropometric measures were not precisely estimated). Disaggregating by the length of participation in the program it becomes clear that the effects on test scores are positive for all groups that participated for more than 7 to 13 months, independent on the comparison group used for the evaluation.<sup>10</sup>

<sup>10</sup> Two comparison groups were used. The first consisted of children living in areas in which the program had been implemented but who had not participated in the program. The second group was made up of families that would qualify for the program, but lived in areas where it had not been implemented.



Effects of the program on anthropometric measures (i.e. height-for-age and weight-for-age) are not precisely measured and the analysis found negative impacts for short periods of exposure to the intervention (Behrman et al., 2004). An analysis of the marginal effects of the program used only the participants sample and looked at the effect of an extra month of intervention. Results are consistent with the previous ones in that the effects seem to be positive for test scores but insignificant for anthropometric measures. Marginal effects on test scores seem to be increasing with the duration of exposure to the program.

The PIDI evaluation is one of the few that attempted to do a cost-benefit analysis of the program.<sup>11</sup> It found a cost-benefit ratio between 1.7 and 3.7 depending on the assumptions used in the calculation. The effects of the program on earnings seem to justify implementation of this type of intervention as an effective tool for reducing poverty; however, it is worrisome that the nutritional indicators did not improve using a range of different methodologies. This is an issue that should be further looked into and improved in the future.

The program Hogares Comunitarios de Bienestar Familiar in Colombia was started during the mid-1980s, and preceded Bolivia's PIDI. Selected mothers act as daycare providers for up to 15 children between the ages of 0 and 6 (see Attanazio and Hernandez, 2004). Participating parents pay a monthly fee that is roughly equivalent to US\$4 and in return receive daycare services and food (including nutritional supplements). However, the average fee actually paid is of US\$2 and in some cases caretakers do not even charge a fee. The program currently is the largest welfare program in the country, benefiting over one million children and accounting for 0.2 percent of GDP. An interesting resource used in the evaluation is the information from the control group created for the evaluation of the Familias en Acción program, which allowed the creation of treatment and a control group for Hogares Comunitarios. The data for the Familias en Acción baseline included the distance between the households and the nearest healthcare center, which was used as an instrument variable to determine participation in the program.

Results for the Hogares Comunitarios de Bienestar Familiar program show that it has positive effects that would be overlooked if the methodology did not control for endogeneity in treatment selection (i.e. when not using instrumental variables). Specifically, the study found that 72 month old children who received program treatment since birth were approximately 3.8 centimeters taller than control group children, but no effects were found in the weight-for-age indicator. Positive effects in school attendance and progress were also found for former beneficiary children aged 13 to 17. In addition, positive effects were found in mothers' working hours and employment rates. Effects of the program were also found to be heterogeneous with larger effects for poor and low educated mothers.

An important factor highlighted in the evaluations is the need to take into account the endogeneity of treatment in order to avoid biases in the results. The Hogares Comunitarios de

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<sup>11</sup> The evaluation compares the cost of the program with benefits in terms of increased earnings due to variables associated with the program such as height and cognitive skills. The fact that they have to use rates of return to such characteristics from studies in other countries or regions (e.g. Pakistan) shows the difficulty of undertaking cost-benefit analyses of social programs.

Bienestar Familiar evaluation attempted an exercise using similar matching techniques as the ones used in the evaluation of the PIDI in Bolivia, finding that positive effects vanished using the PIDI evaluation approach. This might be one of the reasons behind the lack of evidence on the nutritional effects of the PIDI in Bolivia.

Two Guatemalan programs were also evaluated. The first one was implemented by the Instituto de Nutrición de Centroamérica y Panamá in four villages from 1969 to 1977 (see Behrman and Hoddinot, 2001). Two of the four villages were selected to receive the dietary supplement *atole* (which has a high protein content) and the other two received a drink called *fresco*, which contained no protein, and fewer calories but similar micronutrients. Participation in the program was voluntary and children were monitored until they reached 7 years of age. Follow-up information was collected for participants in all communities in 2002-2003 in order to measure the effects of the supplement during adulthood.

The evaluation shows that women posted increased grade attainment resulting from the higher likelihood that they would attend school and complete at least some secondary school. Another result was that women made speedier grade progressions and had higher scores on cognitive tests, and that men had higher scores on educational achievement tests.

The second Guatemalan program evaluated was Hogares Comunitarios, whose design is similar to Hogares Comunitarios de Bienestar Familiar in Colombia and the PIDI in Bolivia. The program was established in 1991 in Guatemala city and provides approximately US\$0.60 per child per day to the caretaker for food, fuel and educational material, plus US\$3 per child per month and a fee of US\$5 per child paid by the parents (see Ruel et al., 2002). From a random sample of control households with similar characteristics as the treatment group it was found that while the program seemed well targeted in terms of poverty, it only covered 3 percent of the households that would qualify for the benefit. The evaluation also found that many beneficiaries (in contrast with Colombia) paid higher fees than what the program required<sup>12</sup>. The program had a positive impact on the intake of calories, iron, vitamins and proteins by beneficiary children compared to their control group. However, it does not compare other indicators such as height-for-age or weight-for-age scores.

## **Social Investment Funds**

Social Investment Funds (SIFs) were initially conceived and established in many countries as a response to the macroeconomic adjustment programs implemented at the end of the 1980s and early 1990s. They were an attractive instrument for governments because they had the potential of compensating for spending cuts and the negative impact of the reforms. It was also considered attractive by donors because they offered an alternative to inefficient line ministries. The central objective of the traditional SIF is financing and, in certain cases, the provision of social and economic infrastructure on a small scale in rural areas and low-income urban areas. Some last-generation SIFs have expanded their portfolio of interventions to include pilot social programs using cutting edge technology (FOSIS in Chile) or programs to support productive activities (tourism, agriculture and livestock, agroindustry, etc.).

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<sup>12</sup> This was also the consequence of extended hours in the provision of day care services requested by parents.

SIFs have been generally perceived by governments and the international community as effective channels for providing assistance to the poorest communities. This was demonstrated by the ability of SIFs to attract financial support from a wide range of bilateral and multilateral sources. In many countries, social investment funds are playing a new role as part of comprehensive strategies to enhance human capital among the poor. They also became key supply-side elements of nascent human capital strategies providing direct cash transfer incentives to poor families.

### *Key Elements in Designing SIFs*

The traditional social investment fund focused on providing infrastructure to support the delivery of basic social services (education, health, water and sanitation) or basic infrastructure for productive activities (irrigation canals, rural electrification or rural roads). The objectives of these interventions was to increase school attendance and the human capital accumulation of poor families, reduce the prevalence of infectious diseases, boost productivity and family income and increase the well-being of beneficiary communities.

SIFs were believed to enjoy three key institutional advantages compared to traditional government agencies: innovative procurement, better-paid and motivated staff, and high quality information systems. The funds were said to be “demand driven” in that projects were financed in response to community requests rather than in accordance with an investment plan. From the beginning they had multiple objectives. In some cases, the principal objective was the provision of employment to people made unemployed by the adjustment programs; in others, the delivery of infrastructure services to the poor was given priority. In most cases the funds were set up as nonpermanent entities that would either disappear once the initial crisis had abated, or be absorbed by line agencies once the institutional efficiencies had been more widely adopted.

SIFs normally defined eligible investments *ex ante* as a way of prioritizing social infrastructure (health centers, primary schools, latrines and potable water) as well as local roads and markets, improved stoves, reforestation and micro-irrigation, among others.

A key element in the design of social investment funds was ensuring the adequate participation of women in all stages of the project cycle. Recent studies have documented insufficient and unequal participation by women in a number of the funds in the region. These problems have been identified from the preparatory stages where the communities decide on which projects they are going to present to the fund, up to the impact evaluation studies at the end of the projects.. There are many reasons for the lower participation by women in decision-making processes. For instance, they may not be invited to the meetings; it may be assumed that the husband’s opinion is shared by his family and, therefore, his vote alone is sufficient; or, in many communities, (particularly rural ones) women lack the authority for proposing and defending the projects they consider to be top priorities.

## *Development Effectiveness and Lesson Learned*

Five impact evaluations are available for social investment funds in the region: Bolivia (Social Investment Fund-FIS), Honduras (Honduran Social Investment Fund-FHIS), Nicaragua (Emergency Social Investment Fund-FISE), Panama (Social Investment Fund-FIS) and Peru (Compensation and Social Development Fund-FONCODES)<sup>13</sup>. These social investment funds have invested in large numbers of generally well designed and adequately concluded projects, mainly primary schools, sanitation, potable water and health centers.

**Table 4**  
**Summary of the Social Investment Funds Evaluated**

<b>Country</b>	<b>Inception</b>	<b>Period evaluated</b>	<b>Average annual investment (for period)</b>	<b>Average annual investment per capita</b>	<b>Average number of community projects financed in a year</b>
Bolivia (FIS)	1991	1993	35	5.8	439(1991-00)
Honduras (FHIS)	1990	1990-1997	30	6	1500 (1990-00)
Nicaragua (FISE)	1990	1994-1997	24	6	752(1991-98)
Panama (FIS)	1990	1997-2001			
Peru (FONCODES)	1991	1994-1997	124	5	4514(1991-99)

Source: Rawlings et al., 1997.

*Targeting Performance.* The evaluations show that social investment funds are successful in using geographic targeting to identify and provide benefits to poor households. The amount of resources allocated by the funds to the districts or municipalities in the lowest three income deciles is, on average, twice as high as the funds allocated to the three highest income deciles in Bolivia, Honduras and Nicaragua, and 11 times higher in the case of Peru (see Rawlings et al., 2004). The results are also satisfactory at the household level, when targeting is examined using poverty lines, , but they vary by type of project. Projects dealing with education, health and latrines usually show adequate levels of targeting, but those that provided water and sanitation show inadequate targeting. In the countries analyzed, social investment funds show better targeting than other poverty alleviation programs (Bolivia and Peru) and than general spending on education and health (Nicaragua). Notwithstanding these positive results in targeting, in some cases, beneficiary communities and local actors (municipalities) have been excluded from the project cycle and were not responsible for project operations and maintenance.

*Impacts on Well-being Indicators.* Social investment funds have been shown to be successful in building or rehabilitating schools in the communities covered. Schools in program

<sup>13</sup> For details of the results of the impact evaluations of social investment funds see: for Bolivia, Rawlings et al., 1997; for Nicaragua, Rawlings , 2002; for Honduras, IFPRI, 2003; for Panama, Marcano, 2004; for Peru, Apoyo, 2000.

communities report better physical conditions (including drinking water and sanitation) than in communities not covered by the program. In most cases, there were complementary efforts to improve the supply of educational materials and human resources as well. Unfortunately, significant gains in the supply of education services were not matched with significant increase the demand and thus there were not significant increases in the school enrolment rate in most of the countries. Only in Nicaragua was there a significant rise in school enrollment in communities that received assistance compared to communities that did not. In Peru, a significant rise is observed only in communities living in extreme poverty. These results suggest that there are factors other than the quality of infrastructure and materials that affect school attendance in the assisted communities.

The improvements in the supply of education brought about by the social investment funds had positive impacts on school performance indicators in all the cases studied (with the exception of Bolivia). In Honduras and Nicaragua, positive impacts were reported on indicators for grade by age. In Peru, positive impacts were reported on children years of education in households that benefited from FONCODES investments and in absenteeism due to illness. However, these improvements were not found in indigenous communities, which suggest the need for specific interventions for these groups (improvements in bilingual education, adaptation of the curricula to specific ethnic conditions). In the case of Bolivia, standardized tests did not report differences in student performance between beneficiary and non beneficiary schools.

In the area of health care, the SIFs were successful in rehabilitating health posts in the communities that received assistance. The improvements in infrastructure included better equipment in newly built or rehabilitated centers in Bolivia and Nicaragua, but not in Honduras. In general, most of the communities whose health centers were rehabilitated with financing from a social investment fund have better use indicators than centers that did not receive this assistance (with the exception of prenatal care in Nicaragua). In Bolivia, the only country for which information on mortality rates is available, the communities with FIS-assisted health centers experienced a significant drop in mortality rates (31 per 1,000 in 1997, compared to 67 per 1,000 in control communities, where the rates increased slightly between 1993 and 1997).

Investments in water and latrine systems were successful in increasing connections and access to these systems, with important positive effects in the incidence of diarrhea and other health indicators. Consistent with international evidence, investments in water led to better health indicators, except in the case of Honduras. In Peru, the incidence of diarrhea was reduced by 3 percent for children under 10 and infant mortality among children under 5 was 33 per 1,000 in beneficiary households compared to 60 per 1,000 in control households. It should be stressed that in Peru, the intervention was accompanied by training for families in the use of water and hygiene. Investments in sewer systems did not lead to improvements in family health; however, given the low percentages of residential connections, this is consistent with international experience. SIF financing for sewer systems is limited to the main system. Households are required to pay for connections and internal systems.

The impact evaluation shows the importance of training and maintenance to ensure the sustainability of investments. In Honduras water production in systems rehabilitated or constructed by the FHIS was significantly lower than in the comparator systems, these production shortages are explained by shortcomings in maintenance (defective filters, excess pressure, defective tanks). In Bolivia, the only country where studies on water quality were conducted, significant improvements in water quality were only reported in communities with projects that included training components.

Only one SIF impact evaluation in the region, the recent evaluation of the Panama FIS sponsored by the Bank's Evaluation Department, assesses the impact of SIF investments on household poverty levels. The evaluation finds a reduction in poverty and extreme poverty levels of 3.5 and 1 percentage points respectively in communities that benefited from the program relative to control communities between 1997 and 2001. This relatively smaller impact of the fund on extreme poverty may imply the importance of combining supply-side interventions with specific interventions at the household level targeted to extremely poor families in order to maximize the benefits of these investments on reducing extreme poverty.

The evaluations show the importance of the Funds of having inter-institutional agreements established with line ministries and local governments to define Operation and Maintenance (O&M) responsibilities for its investments. Emphasis on infrastructure was not matched by similar concern with the quality of services, facilities often lacked staffing for adequate operation, operational and maintenance arrangements failed - projects financed under previous operations coming back to the SIF for repair.

As seen social investment funds play an important role in the provision of basic infrastructure and access to basic health and education for poor families living in poor rural areas. In many countries SIFs remain the only mechanism for providing small local infrastructure for the poor. Most SIFs have improved their development effectiveness over time and have overcome many of the shortcomings of their initial phases. Some important lessons have been learned from their implementation over more than 15 years in the region, the main lessons include: (i) the importance of community participation and community strengthening, which are key elements for success at all stages of execution, from the identification of needs and investments to project preparation and monitoring/supervision of execution; (ii) the need to place greater emphasis on integrated investments at the community level in order to maximize their impact; (iii) the need to take into account inter-institutional coordination with line ministries and national agencies (generally education, health, public works), clearly defining the role of the social investment fund vis-à-vis other government agencies with respect to responsibilities for defining critical policy areas for both poverty strategy and infrastructure provision; (iv) the need to focus on decentralization and coordination with local governments, including mechanisms for sharing financial responsibilities and delegating project cycle actions (preparation, implementation, maintenance, etc.); (v) the importance of updating and maintaining databases and information systems to monitor implementation and impact evaluation.

## Health Programs

Two interventions are included in the current version of this review.<sup>14</sup> The first program included is the Maternal and Child Health Insurance Program in Peru, whose objective is to lower maternal and perinatal morbidity and mortality. The program provides technical cooperation to implement a mother and child health insurance plan to spur the use of medical services by providing a full subsidy for pregnancy and maternity centers for women living in the country's eight poorest departments. The program also provides essential pediatric care for their children up to the age of five. Technical cooperation was also provided to improve quality and effectiveness, including changes to improve socio cultural acceptance of the services provided. About 356,630 women and children were registered for the insurance in 2001.

The results of this program point to higher levels of satisfaction with the services received and shorter waiting lists for beneficiaries of the insurance (see Jaramillo and Parodi, 2004). There was also evidence of increased savings due to the decline in the direct costs of medical care for the poorest households. However, the opportunity costs associated with seeking care continue to be high (transportation, absence from work, etc.). Use of services increased for prenatal and pediatric care but did not change for maternity care, perhaps as a result of the lack of stress placed on the component to reduce socio cultural barriers to health care. Unfortunately, efforts to focus the project were not optimal, since it was extended beyond the eight poorest departments to include other less poor departments, thereby limiting efforts in the departments that were selected initially.

As a result of the evaluation, in 2003, changes were made to the program to sharpen its focus and lower socio cultural barriers to access health care services. A final evaluation will determine the program's impact on mother and child morbidity and mortality.

The second program is also in Peru and aims to expand the health service infrastructure to provide preventative and primary health care. The evaluation of the effects of this expansion in health services supports the idea that increased health infrastructure will improve child health (see Valdivia, 2004); however, the coefficient is only marginally significant for the specification that controls for district fixed effects in urban areas. This indicates that an increase of 1 standard deviation in the infrastructure index will increase height by 1 standard deviation. However small, the effects seem to be greater for low-income groups in urban areas, which highlights the pro-poor tendency of these investments.

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<sup>14</sup> Impact evaluations in the area of health to be added in to the review in future versions include an evaluation of contracting out to NGOs in Guatemala (Danel and LaForgia, 2004), of the effect of subsidize health insurance on utilization and out of pocket spending by the poor in Colombia (Trujillo, Portillo and Vernon, 2005), of distance education on diarrhea management in Central America (Flores, Robles and halter 2002) and of the effect of a set of nutrition programs (Included in World Bank, 2006).

## Education Programs

Impact evaluations for programs to improve the demand for education include (in addition to conditional transfer programs described above), a project in Argentina to support the national student grants program (PNBE) and a project in Colombia to provide school vouchers so that poor students can attend private schools (PACES). Impact evaluations of demand-side education projects show that those that provide incentives through scholarships and school vouchers can be effective in promoting greater school attendance, attainment and other positive outcomes.

The PNBE program provides annual scholarships of 400 pesos to families with total incomes of less than 500 pesos per month who have children between the ages 13 to 19 years. A condition of the scholarships is that the children attend school and progress through the grades in a satisfactory manner. The program's target population during the 2003-2004 school year was 350,000 students and it had an estimated cost of US\$46 million. An early analysis of the program (see Ravela, 2000), which relied on secondary sources of information, found that the PNBE resulted in a significant increase in the number of youths between 13 and 19 years of age, in the lowest income quintile, who attended middle school in most urban areas. However, the evaluation failed to show strong impacts on secondary school enrollment. Nevertheless, the program had a significant impact on school attendance, which increased the longer that beneficiaries participated in the program. Students receiving the scholarship for 3 or more years attended school for nearly three-quarters of a year longer than those who did not receive a scholarship. A more recent evaluation sponsored by the IDB (see Heinrich and Cabrol, 2002) using data from 1999 to 2004 showed mixed results with respect to targeting: children from lower income families were significantly less likely to benefit from the program, but children who scored higher on the index of precariousness (i.e. at greater risk for not completing school) were significantly more likely to participate in the program.<sup>15</sup> The PNBE program showed no statistically significant effect on students' performance as measured by their average course grades. There was also no effect on the time devoted to work outside the home.

The evaluation of the PACES program in Colombia also showed positive results (see Angrist et al., 2002). One hundred and fifty thousand students participated in the program in the mid-1990s. The program resulted in a 10 percent higher probability that participants would complete grade 8. In addition, they repeated fewer grades, obtained better marks and completed 0.1 more years than non participants. There is also evidence that participants were less likely to be working children, get married or cohabit. Also, PACES participants increased their spending on education up to the equivalent of 70 percent of the grant. A more recent evaluation (see Angrist et al., 2004) of the cohort exposed to the program shows that the probability that beneficiaries finished secondary school and registered to take the mandatory college entrance exam (ICFES) increased by 5 to 7 percentage points. Participants also increased their test scores in the entrance exam by around 2 percentage points. These results suggest that the program was a cost-effective intervention.

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<sup>15</sup> Survey sponsored under the activities of the IDB loan to support Argentina's priority social programs during the recent crisis.



Programs to improve the supply of education services in the region include investments to build and upgrade infrastructure, curriculum reform, teacher training and certification, financing reform, and distance education, among others. Impact evaluations are available for a sample of projects in these areas. As discussed below, evaluations of school financing reforms show that they can be effective in improving enrollment and school outcomes for disadvantaged students and students living in isolated or poor areas (by increasing funding for distance schooling and bilingual education). However, the studies also found that the success of reforms may vary depending on the context of each school, a point that is sometimes overlooked by policymakers who fail to take into account the impact of large differences in context at the local level. Finally, an evaluation of a project in Argentina shows that investments in preschool infrastructure may increase enrollment rates, but have no effects on female labor force participation if they are not accompanied by complementary policies and services.

The Mexican government undertook an important effort to improve distance education and expand access to school for underprivileged rural children. The CONAFE program provides extra resources to schools that enroll disadvantaged students, including all indigenous schools and schools in isolated rural areas. The program currently supports around 4 million preschool and primary students and around 300,000 students in distance secondary schools (*escuelas telesecundarias*). A 2004 World Bank evaluation that covered 1998 to 2002 (see Shapiro and Trevino, 2004) shows that the program is well targeted and that primary schools participating in it increased math scores by 4.8 to 5.6 points compared to nonparticipating schools (around 12 percent of the annual average difference in scores between participants and nonparticipants). Moreover, test scores for indigenous students were slightly higher. Math scores at the secondary school level increased by 0.02 to 1.4 points per year (around 15 percent of the difference in scores) for *telesecundaria* students compared to students in nonparticipating schools. Spanish language test scores in the primary grades did not show the same improvement. Participating school students had similar or slightly lower scores than nonparticipating school students. However, language test scores did rise for students at the secondary level, where scores increased by 0.8 to 3.4 points (around 25 percent of the difference in scores). Students at both participating and nonparticipating schools reduced their repetition and failure rates, but participating schools outperformed nonparticipating schools in the case of the failure rates of less disadvantaged students and in the case of repetition rates for less disadvantage and mid-range students.

Brazil's FUNDEF program (Fundo para Manutenção e Desenvolvimento do Ensino Fundamental e Valorização do Magistério) redirected resources to basic education, redistributed education resources according to the number of children enrolled in basic education in each state and municipality, and increased the portion of resources allocated to paying the wages of public school teachers. The impact evaluation of the program shows an improvement in public school performance that may be associated with improvements in the wages of teachers and principals (see Menezes-Filho and Pazello, 2004).

The final evaluation is from a program to expand school attendance for children between the ages of 3 and 5 in Argentina. Between 1994 and 2000 the program created 176,550 school places at an estimated cost of US\$53 million. An evaluation of these interventions estimated that initial rates of preschool attendance (for 1991) were 49 percent (see Berlinski and Galiani, 2004). Preschool attendance is an important determinant of primary school outcomes in Argentina. The impact evaluation shows that the program was successful in increasing preschool attendance (estimated impact of 6.1 percentage points), but it shows little effect on mothers labor force participation. An important policy conclusion is that longer school days may be required to have stronger effects on female labor force participation.

### **Training Programs for Unskilled Youth**

The structural reforms and investment flows of the 1990s created a growing demand for skilled labor in Latin America's new industries. This change in demand resulted in a widening of wage gaps and an increase in income inequality in the region. To address this problem, training programs have become a very important tool for boosting the average productivity of the workforce and increasing the likelihood that vulnerable and poor groups can find jobs.

The objective of this type of programs is to provide training for young people who do not have the resources necessary to obtain an adequate education, and to boost the productivity and competitiveness of micro enterprises. Three programs in the region are worth highlighting, Chile Joven in Chile, Proyecto Joven in Argentina and ProJoven in Peru. Chile Joven was the region's pioneer program. The first phase, which received IDB financing, began in 1991 and ended in 1995. The second phase began in 1996 and ended in 1999. The basic design of Chile Joven was used as a model for many other youth training programs carried out later in other countries.

**Table 5**  
**Youth Training Programs Evaluated**

<b>Country</b>	<b>Project</b>	<b>Year of inception</b>	<b>Period of the evaluation</b>	<b>Beneficiaries (round)</b>	<b>Total cost per beneficiary (US\$)</b>
Argentina	Proyecto Joven	1993-1999	1997	23500 (5th round)	
Chile	Chile Joven	1991	1997	23000*	750 - 1450
Peru	ProJoven	1996	2000-01	3296	

\*Estimate based on the goal of the program

In its first phase, Chile Joven reached 120,000 people at an approximate cost of between US\$750 and US\$1,450 per participant (see Santiago Consultores Asociados, 1999). The objective of the second phase was to reach 70,000 beneficiaries in three years. The countries that implemented programs along the lines of the Chile Joven model included Argentina and Peru. Proyecto Joven (youth training project) in Argentina began in 1993, with support from the IDB and UNDP. It was led by the Ministry of Labor, and its objective was to train 200,000 youths (see Cossa et al., 2004 and Aedo et al., 2001). The program in Peru began in

1996 on the initiative of the Ministry of Labor and Social Promotion, with support from the IDB, and was intended to train youths with low levels of education and few economic resources and help them find jobs (see Chacaltana, 2003; Ñopo et al., 2002; and Ñopo et al., 2004). All these programs have low-income youths as their target population, with some stressing training for women. They all require impact evaluations, including the monitoring of control groups.

One of the key features of this type of program is that the training is based on the labor demand of specific companies, which ensures that young people will be trained in areas where there already is a market demand. Suppliers interested in offering the courses must enter a public competition; they are evaluated based on the number and quality of practical training slots they can offer to students in the different training areas for which there is a demand from participating companies. These programs provide additional incentives for the participation of low-income youths by paying them a stipend to cover transportation, food and accident insurance. Mothers with young children receive an additional subsidy to cover the cost of day care. One of the goals of the youth training project in Argentina was that women make up 47 percent of the beneficiaries. The program trained women in nontraditional occupations as a way of combating job segregation.

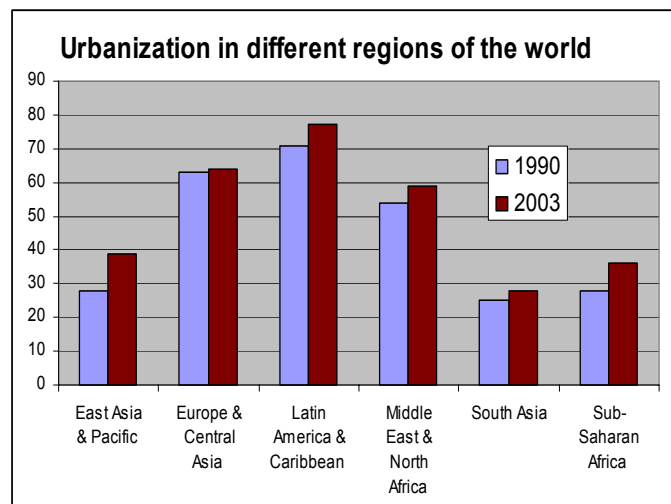
The impact evaluations of the interventions show important benefits, but there is heterogeneity in the results. Chile Joven, for example consisted of three different subprograms that varied in design and affected different groups to different magnitudes (the effect being negative in some cases). However there are some consistencies. In terms of income, Chile Joven benefited informal sector workers more strongly and in terms of employability, those with higher levels of education benefited the most. The various evaluations of Proyecto Joven and ProJoven are consistent in that both programs seem to have a greater impact on female than male trainees. One of the evaluations of Proyecto Joven finds that the program increased earnings only for young men and adult women and employability for adult women, the second evaluation finds positive effects on income (the largest effect being for women) and no effects on employability. ProJoven showed a positive impact in total monthly earnings for all groups (although it was much larger for women). In this case the reason for the disparities in the impact of the program on men and women is that it increased employment rates for females by more than males (the effect on hourly earnings is similar for both groups). It is argued that the employment rate increased more for females because the practical training requirement gave incentives for employers to consider hiring women in occupations that were traditionally held by men, thus reducing segregation in the labor market. It is not clear that this argument would be valid for the case of Proyecto Joven in Argentina since the main effect seems to have been through income and not employment.

### **Comprehensive Urban Development Programs for Marginalized Neighborhoods**

Latin America differs from the rest of the developing world in many aspects, one of them is its high level of urbanization. The region has gone through a gradual process of urbanization during the past decades, resulting in an increase in urban population from 50 percent in 1960 to 77 percent in 2003, making it the most urbanized region in the developing world. While

poverty rates tend to be higher in rural areas, the high degree of urbanization makes reducing urban poverty an important part of the fight against poverty. For example, in Chile and Brazil 84 percent and 70 percent of the poor, respectively, live in urban areas.<sup>16</sup> Given the different nature of urban poverty it is necessary to customize programs to the specific needs and risks faced by the urban poor.

**Figure 2**



*Source: World Development Indicators 2005.*

One of the best known urban development projects is Favela Barrio in Brazil. Favela Barrio was conceptualized by the municipality of Rio de Janeiro and partly financed by the IDB through two investment loans approved in 1995 and 2000. Favela Barrio symbolizes a change in focus by the government from eradication to development and inclusion of the *favelas* into the city. The program is a mix of infrastructure, land tenure and social development components. The infrastructure component provided water, gutters, sewerage and lighting hardware as well as road improvements; while the social component included the construction of early child care centers. In the first phase of the program a total of two hundred and eighty-four public works were executed in the targeted *favelas*.<sup>17</sup>

A recent evaluation of Favela Barrio (see Soares, 2004) found that that the neediest households were not always beneficiaries of the program. However, when they were selected to participate in the program, neediest households were given priority. The evaluation measured three output indicators (water access, sewer and rubbish collection) and three outcome indicators (illiteracy, income and population). There is significant evidence that the program had an impact on water and sewer access.<sup>18</sup>

<sup>16</sup> Dercon, 2004.

<sup>17</sup> Only *favelas* of between 500 and 2500 households are eligible for the program, however other programs were implemented for *favelas* outside of this range.

<sup>18</sup> While not robust to different specifications, it should be noted that some results indicate that the program may have had a negative impact on household income.

Mortality rates in the favelas fell between 1995 and 2001. Given that access to water and sewerage is generally thought to reduce diseases and therefore mortality rates, it is somewhat puzzling that statistical evidence does not reveal any direct effect of the proxy for participation in Favela Barrio on disease-induced infant mortality rates.

### **Water and Sanitation Programs**

Evaluations in the area of water and sewerage are available for a project to expand provision in Quito, Ecuador, and for the effects of the privatization of water services in Argentina, Brazil and Bolivia. The evaluations yield positive results and highlight the importance of access to water and sewerage for reducing child mortality (both show a decline of close to 10 percent in child mortality). In addition, they show that an effort to perform high quality evaluations is crucial to avoid large biases (either way) in estimated impact.

The water and sewerage project in Quito, which was started in 1994, provided almost 20,000 household water connections and installed approximately 300 Kms. of sewers in 22 neighborhoods (see Galdo and Briceño, 2004). It yielded a reduction in child mortality of between 7.2 and 9 percent. However, the evaluation without matched estimates overestimated the impact of the program by around 100 percent. It also showed that, while the effects seemed to be stronger for high-income beneficiaries, the determining factor was education (that is, mothers with relatively higher education benefited equally regardless of their level of income). A complementary education component could potentially increase the impact of these types of programs. Unfortunately, the secondary databases used for the evaluation did not include data on diarrheal morbidity, which is the variable usually used to measure the health impacts of water and sanitation investments. This shortcoming also prevents benchmarking with available international evidence on the impacts of water and sanitation investments (see Cairncross and Valdmanis, 2004).

In the 1990s, many countries in the region embarked in the large-scale privatization of state-owned companies. While there is no consensus about the impact of the privatization of water services on household welfare, there is some evidence that it helped to improve the welfare of the poor or, at the least, that it did not hurt them.<sup>19</sup> Two recent impact evaluations (one for Argentina and the other for Argentina, Bolivia and Brazil) attempt to measure the effects of privatization on welfare, particularly the welfare of the poor.

Between 1991 and 1999, public water companies in Argentina were transferred to private control.<sup>20</sup> An evaluation of the effects of this process on child health found that privatization reduced child mortality resulting from infectious diseases and, on average, contributed to a decrease in child mortality of between 4.8 and 6.7 percent, regardless of the methodology used (see Galiani et al., 2005). This effect is significantly larger for municipalities with high

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<sup>19</sup> It should be remembered also that the Favela Barrio evaluation found that access to sewerage decreases child mortality.

<sup>20</sup> The public companies provided service to one-third of the nation's municipalities, covering 60 percent of the nation's population.

levels of poverty.<sup>21</sup> When disaggregating by cause of death, mortality rates fell only for the causes of death more closely related to access to water. This means that the possibility of biases caused by omitted variables correlated with privatization and mortality are eliminated. The results of the regional evaluation of privatization of water services are less conclusive (see Clarke et al., 2004) and show little evidence one way or the other regarding coverage and sewerage connection. However, this may be due to the small sample used and lack of control for municipality-specific characteristics.

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<sup>21</sup> The estimated impact of privatization on Child mortality is –10.7 percent for poor municipalities and –23.4 percent for extremely poor municipalities.

## **V. SCALING UP PROGRAMS TO INCREASE THE ECONOMIC OPPORTUNITIES OF THE POOR**

A comprehensive approach to poverty reduction should not only increase the productive capacity of the poor, but also give them the means to turn that capacity into an improved standard of living. Providing the poor with access to markets (goods and services, financial and labor markets) plays a key role in enabling them to share in the benefits of growth and protect themselves from falling into poverty traps during recessions. An broad set of policies is required to enhance employment and business opportunities for the poor. These include providing support to active labor market programs, microfinance and enterprise development, private sector incentives, and the efficient provision of infrastructure services such as energy, roads, ports and airports. In addition, access to markets for the poor should take advantage of value chain opportunities that integrate poor rural producers and small urban entrepreneurs into domestic or international markets.

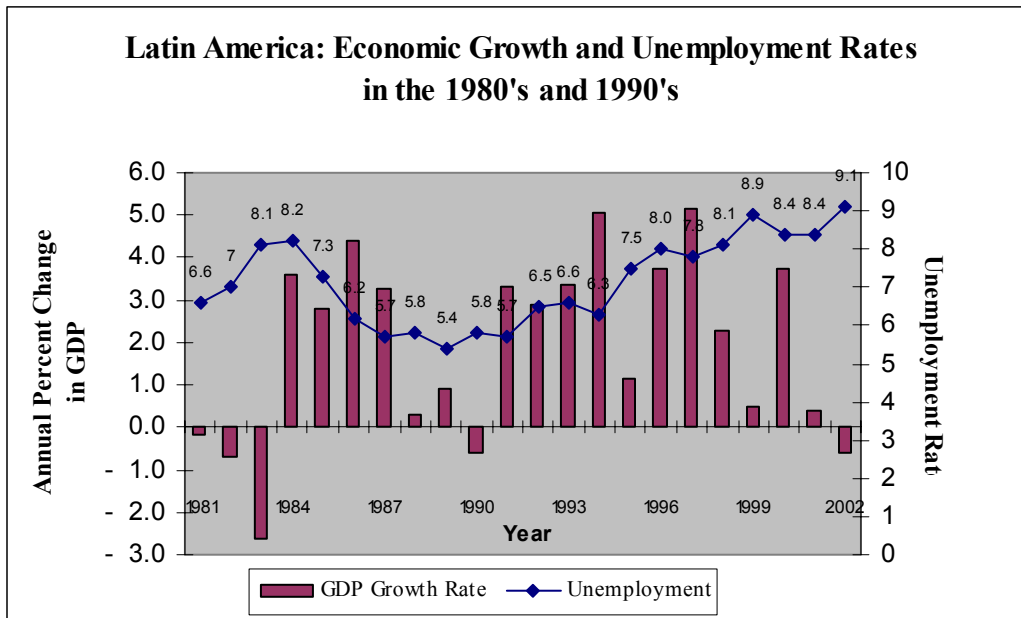
The creation of economic opportunities for the poor during the last decades has been disappointing in the region. Pro-poor growth has been scant in most countries and labor markets have failed to produce enough high quality jobs for the unskilled workers of the region. Although the structural reforms in the 1990s had a positive effect on economic efficiency, some groups experienced a negative impact, either because of income instability or because of loss of work. As Figure 3 shows, unemployment rates have not improved even during the growth spell of the early nineties. This situation has been worsened by the recent crisis that affected most countries in the region. Additionally, unemployment rates measured by official statistics are just the tip of the iceberg. Underneath lies a huge informal labor market, where many low skilled workers are employed.

Youth unemployment is one of the urgent challenges faced by the region. The average unemployment rate of persons between the ages of 15 and 29 jumped from 12.8 percent in the beginning of the 1990s to 16.1 percent during the first years of the current decade. Another facet of youth unemployment in the region is the fact that it affects different groups differently. The unemployment rate is higher for poor and unskilled youths, reaching 28.1 percent in 2002 for the poorest youth quintile, compared to 8.7 percent for the richest youth quintile. Young women face higher unemployment rates than young men, especially in the poorest groups.

The micro enterprise sector has become a key provider of employment and opportunities for the poor. Seventy percent of poor earners in Latin America and the Caribbean either own a micro enterprise or are employed in one (Westley, 2001). Thus, the well-being of the poor is very closely associated with the success (or failure) of these business initiatives. After a decade of reforms, most of which included the deep liberalization of financial markets, the region must still find a way to give small businesses and the poor better access to saving and credit markets. Access to financial services (credit, savings or micro-insurance) for the poor has proven to be essential for productive investments—including the increasing flow of

remittances—that help them escape poverty and a provides them with a low cost risk management tool to cope with negative economic shocks. While there have been significant advances in increasing the access of low-income populations to financial, aggregate figures show that there is still a long way to go.

**Figure 3**



Source: ECLAC 2005.

Large deficits in access to these services are evident, especially in rural areas where transaction costs are higher. In recent years there have been increased efforts to measure the depth of financial services provided to the poor and the impact of programs to support the creation of micro enterprises. Recent estimates for ten countries in the region show that only 20 percent of households have savings in the formal sector (8.9 percent of poor households) compared to almost 90 percent in developed countries (Tejerina and Westley, 2005). While microfinance and micro enterprise activities have made great advances in the region, enhancing the impact of these activities on reducing poverty requires greater efforts to promote them, especially regarding regulation.

### Active Labor Market Programs

The region has a great need for programs to help people who are temporarily unemployed to maintain a minimum income level and improve their employability. The programs carried out in the 1980s were heavily criticized because of the negative experiences with the minimum employment program (PEM) and the employment program for heads of households (POJH) in Chile and the labor intensive investment program (PAIT) in Peru (see Márquez, 1999). However, during the 1990s, there were better experiences with programs such as Trabajar in Argentina and Proempleo in Chile.



There are two main types of programs that have been implemented recently to help families that suffer from drops in their income owing to the temporary loss of work by the head of the household. The first model is that of the Trabajar program in Argentina, which was established in response to growing unemployment in the mid-1990s and received technical and financial support from the World Bank. The objective was to provide temporary work for poor families with unemployed members on account of the crisis. Employment was provided in projects to improve local infrastructure. The community, the municipalities and NGOs identified projects together, and the program pays the wages of unskilled workers. This program was replaced in 2002 by the Jefes y Jefas” program, which was much larger in scale and implemented in response to the Argentine crisis that year. Work requirements for this program were not as strict as for Trabajar. The Colombian government implemented a similar jobs program for people affected by unemployment. The program makes unskilled jobs available in basic infrastructure projects for 160,000 families. The community is encouraged to identify projects and each project is expected to last for five months. Since 2002, the government of Peru has also implemented a workfare program similar to Trabajar to help the poorest workers cope with the effects of the latest recession, this program is called A Trabajar Urbano.

The evaluations of these programs show that they can be effective in protecting the income of poor households against economic downturns and idiosyncratic shocks. The evaluation of the Jefes y Jefas program shows that, on average, participants increased their weekly hours worked by about ten hours, and that the income of participants dropped by 100 pesos less than that of non participants, preventing 10 percent of participants from falling into poverty (see Galasso and Ravallion, 2003). Initial impact evaluation results for the Empleo en Acción program in Colombia indicate that hours worked by participants increased by 36 percent and monthly income increased by 39 percent, the impact seems to have been larger for women than for men. Household consumption increased by 9 percent, which though significant, falls short of the original goals set by the program (see Econometría Consultores, 2004). An interesting result in terms of employability comes from the evaluation of a subprogram of Trabajar, which selected a subset of beneficiaries to receive coupons that committed the government to pay part of the workers’ wages (this subprogram was called Proempleo), on the condition that the employer register them in the social security system. It was found that despite the fact that some employers did not take the subsidies, the percentage of employed workers was significantly higher than in the control group (see Galasso, Ravallion and Salvia, 2003).<sup>22</sup>

The programs also seem to be successful in targeting poor workers, although some further improvements in design are needed to avoid benefiting persons not in the labor force. In the case of Trabajar (see Jalan and Ravallion, 2000) and Jefes y Jefas, the programs did a good job in targeting the poor, however the evaluations show that many beneficiaries were not

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<sup>22</sup> One of the explanations is that the unemployed are often stigmatized by their communities and a document that shows that the government is willing to hire them can send a positive signal about prospective workers.

unemployed or were persons not in the labor force.<sup>23</sup> The A Trabajar Urbano Program seems to have been effectively targeted, since 75 percent of beneficiaries belonged to the poorest 40 percent of the sample (see Chacaltana, 2003). The net income gain from the program was 61 soles out of the 300 given by the program. This signals that while poverty targeting was effective, the program found difficulties similar to those of the Jefes program in targeting the unemployed.

The second type of program consists of giving training grants to the unemployed to improve their future income and employability through technical training. Beneficiaries are paid a wage while in training that permits them to maintain a minimum standard of living. Government employment offices provide participants with job placement services. SICAT (former PROBECAT), the job training program in Mexico, which has received IDB support since 1997, is an example. It was launched in 1984 in response to growing unemployment caused by the 1982 crisis. In its early years, the program covered 50,000 people a year; today it covers an estimated 1.2 million. Although the results of the first impact evaluations (see Revenga et al., 2000; Calderón et al., 2002; and Minowa and Wodon, 1999) indicated that the benefits of this type of program should be classified as unemployment insurance (i.e. they had no effect on human capital accumulation), more recent evaluations find that programs of this kind have effects on employability and on the expected income of workers.

### **Microfinance and Micro enterprise Programs**

Given that micro enterprises and small businesses (which are the main clients for micro credit) employ about 70 percent of the working poor in the region (Westley, 2001), the sector has significant potential for poverty reduction and the promotion of equality in the region. The provision of financial services for smaller companies and low-income households helps to reduce poverty and inequality through four main channels: increases in income as a result of using credit for productive activities; increases in the stock of assets through the use of noncredit financial services, particularly savings; benefits from the reduction in the volatility of consumption, thanks to access to financial services; and indirect impacts caused by the expansion of the economic activities of micro enterprises (increases in employment, for example). While there have been advances in the region, wide gaps remain in the use of formal or informal financial services between poor and nonpoor households (see figure 4).

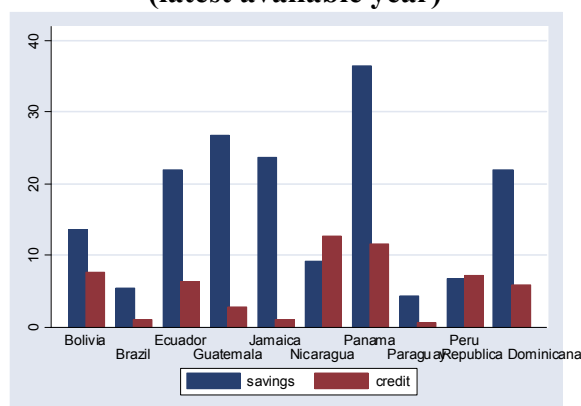
Probably the most difficult topic to evaluate is the impact of projects that support microfinance and micro enterprise. Self-selection makes it very hard to find a control group that is comparable to the treatment group. Because people self-select to participate in a program, they cannot be compared to people who choose not to participate because they will have different observed and unobserved characteristics. Even a randomized allocation of credit would have to be careful to draw treatment and control groups from those who would choose to apply and qualify for a loan. Despite these issues some efforts have been made in the region to overcome the inherent difficulties in this area. Although there are no impact evaluations for the Bank's individual projects in the area of microfinance or micro enterprise,

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<sup>23</sup> For this reason, the net effect on income from Trabajar was of approximately US\$100 each, or about half the wage paid to them

there is available evidence from a series of evaluations attempting to solve the problems mentioned above. Evidence is available from evaluations of Mibanco, and Promuc<sup>24</sup> in Peru and from CRECER<sup>25</sup> in Bolivia, and for the aggregate impact of microfinance in Chile and Brazil. Results in this area should be taken with caution, given the heterogeneity of programs and the mentioned difficulties in evaluating them.

**Figure 4**  
**Gaps in the Use of Borrowing and Savings**  
**Between Poor and Non poor Households**  
**(latest available year)**



*Note: The figures do not always refer to the same type or origin of funds (i.e. may include loans from family and friends), Source: Authors calculations.*

Promuc is a partnership of NGOs formed in 1994 and dedicated to the promotion of micro-enterprise, the empowerment of women and poverty reduction. When the evaluation was carried out, 12 NGOs were members of Promuc. In terms of targeting, 34.7 percent of the sample's clients lived below the poverty line, compared to a national average of 54.8 percent. The impact evaluation found that participating in Promuc increased individual monthly income by around 190 soles more than non client monthly income (see Copestake et al., 2005). The results are robust to different specifications and present somewhat larger effects among men and the richer half of the sample (the increase for women is 162 soles a month, and that for the richer half of the sample, 247 soles per month).

Mibanco achieved formal bank status in 1998 after 25 years of operating as a microfinance institution (Acción Comunitaria of Peru and becoming the leading microfinance institution in the country). It had approximately 58,000 clients and an operational sufficiency ratio of 116.5 percent at the time of the evaluation.<sup>26</sup> The data for Mibanco indicates that 25 percent of program beneficiaries were living below the poverty line at the time of the evaluation,

<sup>24</sup> Promuc is a Peruvian network that offers support to 11 microfinance institutions that implement a community bank program; as well as to 1,352 rural and urban community banks.

<sup>25</sup> CRECER is a nonprofit organization started in 1990 with the purpose of providing credit with education about health and business practices.

<sup>26</sup> The operational sufficiency ratio is defined as: Financial Revenue (Total)/ (Financial Expense + Loan Loss Provision Expense + Operating Expense). For further information about microfinance institutions visit [www.mixmarket.org](http://www.mixmarket.org)

compared to 35.5 percent for the country as a whole showing that there is a bias toward the non poor (see Dunn and Arbuckle, 2001). In the case of Mibanco, the entrepreneurs who obtained credit (with average loans of US\$586 for 3.4 months), reported annual profits that were about US\$1,000 higher than those of the control group.<sup>27</sup> Primary micro enterprise assets increased by about US\$500 and beneficiary enterprises provided 3.26 additional days of employment per month. The effects of access to financial services on risk management and spending on education at the household level in the Mibanco evaluation are negative. On the one hand, access to financial services appears to have contributed to better production risk management in poor beneficiary households, who report more diversified sources of income than the control group. However, beneficiary households that suffered negative income shocks, particularly the very poor, were forced to sell assets to cover drops in income to a greater degree than non beneficiary households.

CRECER is an unregulated nonprofit institution established in 1990 that provides credit with education services to women in Bolivia (see McNelly and Dunford, 1999). At the time of the evaluation it had a financial operational sufficiency ratio of 83.2 percent and approximately 20,000 borrowers. The results of the CRECER evaluation are ambiguous. Median monthly non farm profits were two and a half times more than those earned by non participants and more than five times the income earned by residents in control communities.<sup>28</sup> However, results vary depending on the specification of income used and seem to be negative in some cases. The evaluation found no effect on the nutritional status of clients and their children (which was the main objective of the program) even though nutritional status does seem to be positively correlated with the quality of education that participants receive.

In Chile, the results of changes in income were not robust for commercial bank clients and were negative for NGO clients. In the case of Brazil, the impact of access to financial services was positive for program beneficiaries. Employers and self-employed workers with access to micro credit from banks reported monthly household income that was higher than the control group by 1,494 reais.

### **Land Titling Programs**

While property rights in Latin America are not particularly weak in comparison with other developing regions, there is a significant gap between the region and developed countries, and the situation has worsened in recent years. The property rights index published by the Heritage Foundation as part of the Index of Economic Freedom gives Latin America an average value of 3.4 compared to 1.57 for OECD countries<sup>29</sup> (See figure 5. The general assumption of land titling projects is that increased property rights will increase the ability

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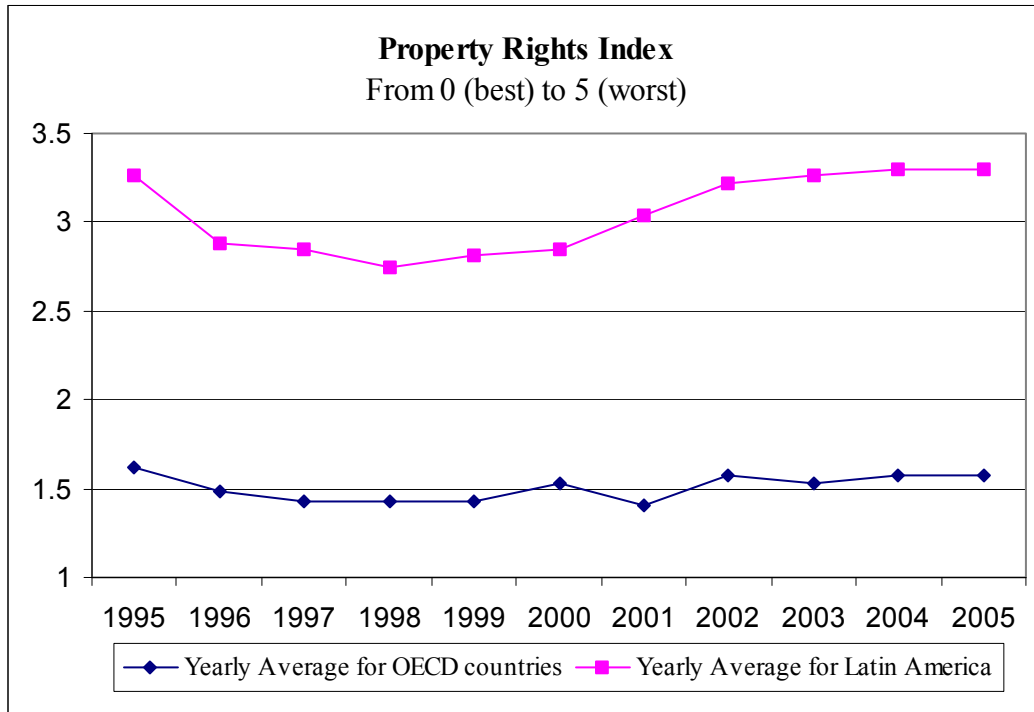
<sup>27</sup> The families of the beneficiary micro entrepreneurs, in turn, reported household income of US\$1,200 more than the control group (US\$266 in per capita terms), which is 20 percent higher than average per capita income in the sample.

<sup>28</sup> Non participants are residents of villages that benefited from the program but did not receive credit, and control communities are those where the program was not introduced until after the evaluation

<sup>29</sup> The index varies from 0 to 5 with 5 being the lowest level of property right enforcement.

(through access to credit) and willingness to invest in productive activities, therefore increasing income and the quality of life of the owner.

**Figure 5**



*Source: Heritage Foundation, Index of Economic Freedoms*

Measuring the impact of a land titling project is a difficult task, the creation of a counterfactual presents many problems and groups of beneficiaries may have unobserved characteristics that generate biases in the estimated impact. Moreover the impact of land titling programs on the many components of poverty may be less direct than with other programs. Recent efforts to evaluate land titling programs in Argentina, Nicaragua and Ecuador present innovative ways to solve some of the methodological problems associated with assessing the impacts of this type of interventions.

The results of the impact evaluation in Argentina come from a government land titling project in the mid-1980s in which landowners were offered monetary compensation for their land and squatters who occupied the land since 1982 were given formal titles (see Galiani and Schargrodsky, 2004).<sup>30</sup> One group of squatters received titles in the 1989-91 period and the second one received titles in the 1997-98 period. The evaluation focused on health effects of enhanced property rights, for this reason anthropometric data was collected from all children under 12 years of age in both treatment and control groups. Findings indicate that land titling has a positive effect on child health (one of the links might be that households are more willing to invest in things like improved sanitation in the house) as measured by weight-for-

<sup>30</sup> Some landowners accepted the offer and some did not, which generates a natural counterfactual for impact measurement.

height scores, and a negative effect on the rate of teenage pregnancy rates (which suggests that there might be positive indirect effects that need to be taken into consideration when weighting the benefits of land titling projects).

The Nicaragua study evaluates a land titling program (which received support from the World Bank) that started in 1992 and at the time of the evaluation had over 40,000 beneficiaries (see Deininger and Chamorro, 2001). Data shows that the program was effective in targeting poor households: household income for the group of beneficiaries is less than half of the income for the total sample. The results for Nicaragua also show that beneficiaries of the land titling program saw an increase of 30 percent in the value of their property when the land was titled and registered. Additionally, productive investments associated with land use increased by 8 to 9 percent. These investments increased more than those in moveable assets or live stock. The returns of land infrastructure investments were also higher (29 percent) than those of moveable assets or live stock (3 and 11 percent, respectively). In this case, as well, the effect is only significant when the land is titled and registered. The evaluation presents positive evidence of the effects of these type of programs when full title and registration are given to beneficiaries.

Evidence from Ecuador comes from a survey of 20 communities with different levels of property rights for their land. Land titling took place in the mid-1990s (see Lanjouw and Levy, 2002). While the case of Ecuador should be taken only as indicative given the size of the sample (51 observations) and the nature of the control group, it suggests that the value of the property may increase by as much as 23 percent (the cost of titling was found to be around 6 percent of property value) on average with larger effects for more recent settlers.

## VI. CONCLUSIONS

While impact evaluations of similar projects in different countries (or regions) are not generally expected<sup>31</sup> to yield the same results, the mounting evidence increasingly allows us to infer some important lessons to design and improve social programs in the region. The results presented in this review show a mostly positive picture of the average impact of the programs evaluated. Results of the evaluations have also proven to be useful, not only for measuring impacts, but also for identifying program weaknesses (e.g. problems with targeting mechanisms or groups that are not reaping the full benefits of the program) and induce the adjustments necessary to increase program effectiveness. The evaluation results and the experience in implementing these programs also raise various issues for the reform of social and fiscal policies in order to make public social expenditure more effective, pro-poor, and fiscally sustainable. This section discusses those general lessons.

*The need to design social programs as harmonious components of extreme poverty eradication policies and social protection systems, taking advantage of instrument complementary.*

A general policy recommendation is that comprehensive programs that complement supply-side interventions with demand-side components and vice-versa, seem to have greater impact and contribute to the sustainability of benefits beyond program completion. The evaluations show that the synergies between supply and demand interventions are especially relevant for programs in the areas of health and education and to make gains sustainable once transfers are terminated.

The relevance of complementary policies is also evident when considering access to credit. While there is evidence that micro-credit increases the income flows of borrowers, there is also evidence that complementary components, such as training, are needed for this effect to translate into better socioeconomic indicators. Even when credit programs have been targeted to the poor, the increase in income generated by the use of credit translated in better socioeconomic indicators (such as improvements in mother and child malnutrition rates) only when high quality training and education programs were in place. While the relationship between secure property rights and access to credit has appeared repeatedly in economic theory, impact evaluations have not generally found that land titling programs alone enable poor people to gain access to credit and make productive investments. Improved institutional arrangements and complementary components such as financial education seem to be possible answers to this puzzle.

Thus, special focus should be placed on strategies that integrate supply- with demand-side interventions, take advantage of comprehensive (vs. isolated and sector specific) interventions, and include complementary interventions to address some specific policy

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<sup>31</sup> Even when the same data is used in different evaluations the evaluation approach may vary and different results may be found.

objectives (for example, after school programs to reduce child labor in conditional cash transfer interventions or interventions that promote increased school enrollment), among others.

*The advantages of cash transfers and the need to include conditionality in program design.*

The evaluations of the programs, especially of conditional cash transfer interventions, also highlight the relative effectiveness of cash transfers versus in-kind transfers and subsidies and the effectiveness of conditionality in the achievement of social policy goals. Results also show that the design of the conditionality and the transfer matters. That is, it is important to carefully design the conditions attached to a program in order to avoid unintended results (e.g. increasing fertility rates of the poor) and have an adequate level of transfers to ensure impacts in consumption.

*The need to include strong components for beneficiary training and monitoring of beneficiary responses in some interventions.*

The qualitative analysis of an early childhood development program in Guatemala suggests that the low impact on nutritional indicators might be due to an inadequate amount assigned to food purchases or to the use of the program transfer to feed family members that are not under nutritional risk. Closer attention and supervision of this component might improve the effects of this type of programs on nutrition. Training is also important to ensure the effectiveness of water and sanitation interventions.

*The need to ensure an institutional environment that is conducive to program sustainability.*

This is especially important for interventions to improve the supply of basic services at the local level, such as social investment funds, urban development programs, and water and sanitation programs. There are six main lessons from the impact evaluation of these programs. The first relates to the need to include community participation and community strengthening as key elements of success at all stages of execution, from the identification of needs and investments, to project preparation and monitoring/supervision of execution. The second is the need to include training components and institutional arrangements to ensure that communities and local governments are involved in the management and maintenance of investments and ensure sustainability. The third is the need to place greater emphasis on integrated investments at the community level in order to maximize the impact of investments. The fourth lesson relates to the need to take into account inter-institutional coordination with line ministries and national agencies (generally, education, health and public works), clearly defining the role of social investment funds vis-à-vis that of other government agencies with respect to responsibilities in defining critical policy areas for the poverty strategy and building infrastructure. The fifth lessons deals with the need to focus on decentralization and coordination with local governments, including mechanisms for sharing financial responsibilities with and delegating the project cycle to local governments (preparation, implementation, maintenance, etc.). Finally, there is a need to place attention on updating and maintaining databases and information systems for monitoring implementation.



*The need to go beyond increased access to improve the quality of services provided.*

Issues of quality in the provision of services, especially in health and education, continue to assume considerable importance throughout the region. Although more children are being educated, the quality of the education they receive leaves much to be desired. This is an unavoidable issue in this discussion. The fact that most countries in Latin America and the Caribbean do not yet participate in international standardized tests makes it difficult to draw comparisons with other regions. However, available national and international evaluations show that student learning remains deficient and well below world averages, with countries in the region ranking near the bottom of the sample. The region has implemented a series of very innovative programs in recent years to improve the demand for basic education and health, more efforts to implement and evaluate successful supply-side interventions are needed to address supply-side deficiencies in the provision of the services.

*The need to respond to political and fiscal questioning of interventions with demonstrated cost effectiveness.*

Programs should explicitly acknowledge and gather evidence to justify interventions in the face of political and fiscal trade-offs associated with the need to extend the duration of benefits to guarantee effectiveness versus the desirability of short-term interventions that allow more extended coverage. Programs should also avoid long-term fiscal entitlements by ensuring clear exit criteria. Impact evaluations for PROGRESA/Oportunidades suggest the advantages of accompanying beneficiaries through the schooling cycle in order to ensure the effects of the program on human capital accumulation, but their record in establishing and enforcing exit rules is weaker. Complementary interventions may be needed to ease the transition of households exiting the programs. Impact evaluations of education scholarships and of early childhood interventions also show the higher benefits of longer program participation.

*The need to ensure cost-effective targeting*

The evaluations show the need to take into account the cost-effectiveness and political feasibility of trade-offs among different types of targeting (including means-testing, geographic, by category, and self-targeting) and the political and fiscal dilemmas associated with targeting versus universal provision in the context of the type of intervention being implemented. Most of the programs evaluated seem to have been effective in terms of targeting a high percentage of poor households; however, it is less clear that the programs are targeting the neediest among the poor. Even if the program is well designed it is important to consider verifying the selection of beneficiaries at the moment of implementation, and when necessary, to complement geographic targeting with other targeting criteria to identify the poorest households.

*The need to identify and respond quickly to opportunities for policy reform*

The experience in implementing and evaluating social programs in the region also shows the importance of impact evaluation and monitoring systems in identifying areas for reform, taking into account the affordability and cost-effectiveness of interventions. The success and resource needs of new approaches in a context of fiscal constraints highlight the need to reform redundant and/or inequitable social policies and programs that create a potentially unsustainable fiscal situation. An area that has not received much attention in this literature is cost effectiveness. While recognizing the difficulty in quantifying returns from different social interventions, comparative studies about cost effectiveness of programs such as conditional cash transfers versus other types of programs would be useful in identifying when these programs will have the highest relative returns and which are the priority areas for reform.

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### Annex 1: Impact Evaluations Included in the Review

Country	Year	Project	Data	Methodology
Argentina	2001	Proyecto Joven	Project Survey	Propensity Score Matching
Argentina	2004	Proyecto Joven	Project Survey	Propensity Score Matching
Argentina	2000	Trabajar	Project Survey	Propensity Score Matching
			Encuesta de Desarrollo Social	
Argentina	2002	Proempleo	Project Survey	Randomization Instrumental variables
Argentina	2003	Jefes y Jefas	Encuesta Permanente de Hogares	Propensity Score Matching
Argentina	2004	Land Titling	Project Surveys	Instrumental Variables
Argentina	2004	PNBE	Project Survey	Propensity Score Matching
			Administrative records	
Argentina	2004	School Construction Program	Encuesta Permanente de Hogares	Difference in Difference
Argentina	2002	Privatization of water companies	Administrative data	Propensity score matching Instrumental variables
Argentina	2004	Privatization of water companies	National household surveys for each country	Multivariate regression
Bolivia				
Chile				
Bolivia	2004	PIDI	Project surveys	Propensity Score Matching
Bolivia	1999	CRECER	Project Surveys	Randomization
Bolivia	1998	SIF	Project Surveys	Instrumental Variables
Brazil	2004	Favela Barrio	Census data	Kernel Matching
Brazil	2002	PETI	Project Surveys	Regression Analysis
Brazil	2004	PETI	Pesquisa Nacional por Amostra de Domicilios	Propensity Score Matching
			Sistema de Avaliacao do Ensino Basico	
Brazil	2004	FUNDEF		Difference in Difference
Brazil	2004	Bolsa Alimentacao	Project Surveys	Randomized beneficiaries <sup>32</sup>
Brazil	2004	All income transfers	Census data	Propensity Score Matching
Brazil	2002	Various microfinance institutions	Project Surveys	Propensity Score Matching
Chile			PNAD CASEN	

<sup>32</sup> The control group for the program comes from beneficiaries that, due to an administrative mistake were excluded because their names begun with certain letters.

Chile	1999	Chile Joven	Project Survey	Difference in Difference <sup>33</sup>
Colombia	2004	Empleo en Accion	Project Surveys	
Colombia	2005	Hogares Comunitarios	Project surveys for the Familias en Accion Program	Instrumental Variables
Colombia	2005	Familias en Accion	Project Surveys	Randomization
Costa Rica	2004	Superémonos	Custom Survey	Regression Analysis
				Propensity Score Matching
Ecuador	2002	Land Titling	Project Surveys	Hedonic price regressions
			Encuesta de Condiciones de Vida	
Ecuador	2004	Bono Solidario	Encuesta de Condiciones de Vida	Instrumental Variables
Guatemala	2005	Dietary Supplement Program	Project surveys	Matched control group
Guatemala	2002	Hogares Comunitarios	Project Surveys	Matched control group (Based on matched individual characteristics)
Honduras	2004	PRAF	Project Surveys	Difference in Difference
Honduras	1999	FISE	Project Surveys	Multivariate regression
Jamaica	2001	SIF	Project Surveys	Propensity Score Matching
Mexico	2002	CICAT(PROBECAT)	Project Survey	Propensity Score Matching
			Nacional employment survey	
Mexico	1999	CICAT(PROBECAT)	Project Survey	Instrumental variables
			Nacional employment survey	
Mexico	2002	CICAT(PROBECAT)	Project Survey	Propensity Score Matching
			Nacional employment survey	
Mexico	1999-04	Oportunidades	Project Surveys	Randomization
Mexico	2002	PROCAMPO/PROGRESA	ENCASEH	Randomization
			Project Surveys	
Mexico	2004	CONAFE	“Estandares Nacionales” Survey	Propensity Score Matching
Nicaragua	2002	Land Titling	Project Surveys	Difference in Difference
Nicaragua	2004	RPS	Project Surveys	Randomization
Nicaragua	2000	FISE	LSMS	Propensity Score Matching
			Project Surveys	

<sup>33</sup> The control group was selected from neighbors of participants in the program that were considered as eligible to participate.

Panama	2004	FIS	Administrative registries National Household Survey data	Propensity Score Matching
Peru	2003	ProJoven	Project Survey	Propensity Score Matching
Peru	2004	ProJoven	Project Survey	Two Step Propensity Score Matching
Perú	2003	A Trabajar Urbano	Encuesta Nacional de Hogares (ENAHOG)	Propensity Score Matching
Peru	2005	Promuc	Project Survey	
Peru	2001	Mibanco	Project Surveys	Difference in Difference ANCOVA
Peru	2004	Maternal Insurance	ENNIV ENDES	Regression Analysis
Peru	2004	Health infrastructure program	Demographic and Health Survey (DHS)	Regression Analysis
Peru	1999	FONCODES	LSMS and INEI household survey	Difference in Difference Instrumental Variables

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Annex 2 Summary of Impact Evaluation Results from Conditional Cash Transfer Programs			
	Brazil – Bolsa Alimentacion, Bolsa Escola and PETI	Colombia – Familias en Accion	Honduras - PRAF
Education	<i>Bolsa Escola</i> <ul style="list-style-type: none"> <li>3 % point increase in school attendance.</li> </ul>	<ul style="list-style-type: none"> <li>No effect in school attendance for children 8 to 11 in urban areas. 2.9 % point increase for 8 to 11 years old in rural areas.</li> <li>3.5 to 10.4 % increase in school attendance rates for children 12 to 17 years old (5.1 to 11.1 % increase for 14 to 17 years old).</li> </ul>	<ul style="list-style-type: none"> <li>17 percent increase of children 5 to 12 that were out of school in 2000 to enroll or re enroll in school in 2001.</li> <li>No impacts on enrollment for the average population.</li> <li>4.3 to 4.6 % points (1 extra day per month) increase in school attendance.</li> <li>2.4 to 7 % decrease in desertion during the school year.</li> <li>4.6 % point reduction in repetition rates in grades 1 to 4. Most of the effect is concentrated in grade 3.</li> </ul>
Health			<ul style="list-style-type: none"> <li>7 – 10 % points increase in children that receive DTP vaccinations on time.</li> <li>No effect on diarrhea on children younger than 3.</li> <li>No impact on iron deficiency anemia.</li> <li>Increased fertility among beneficiaries.</li> </ul>
Nutrition	<i>Bolsa Alimentacion</i> <ul style="list-style-type: none"> <li>9% increase in food expenditures.</li> <li>9% increase in dietary diversity.</li> <li>6% increase in per capita caloric availability.</li> </ul>	<ul style="list-style-type: none"> <li>Consumption increased by around 15 percent, in particular spending on high protein foods, such as meat.</li> <li>Increased height for age (0.78 and 0.62 cms. for children under 24 months and 48 to 84 months). Positive impacts in duration of breastfeeding and consumption of high-protein foods. Levels of compliance with growth monitoring and vaccination protocols are substantial.</li> </ul>	<ul style="list-style-type: none"> <li>No impact on food consumption.</li> <li>No impact on height for age indicators.</li> </ul>
Child labor	<i>PETI</i> <ul style="list-style-type: none"> <li>10.8 % points decrease in overall child labor.</li> <li>4 % points decrease in targeted child labor.</li> <li>Bolsa Escola</li> <li>No effect.</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in hours worked for almost all children (excluding rural children 14 to 17 years old) but reduction in labor force participation only significant for children 10 to 13 in rural areas (2.99 % points).</li> <li>Increased adult labor participation among women in urban areas and men in rural areas.</li> </ul>	
Beneficiaries and total budget	<ul style="list-style-type: none"> <li>8.7 million families, US\$2 billion.</li> </ul>	<ul style="list-style-type: none"> <li>The program covers approximately 362,403 beneficiary families.</li> </ul>	

	<b>Mexico – PROGRESA/OPORTUNIDADES</b>		<b>Nicaragua: Red de Apoyo Social</b>
Targeting	<i>Urban areas</i> <ul style="list-style-type: none"> <li>Adequate targeting rates: under coverage rates of 23.8% and leakage rates of 22.2%, 88% more benefits reaching the poor than random assignment.</li> </ul>	<i>Rural areas</i> <ul style="list-style-type: none"> <li>Better results than in urban areas: 16% of under coverage and leakage rates, 100% more benefits reaching the poor than random assignment.</li> </ul>	<ul style="list-style-type: none"> <li>42 percent of transfers allocated to families living in extreme poverty and 38% to families living in poverty. 17 of families in extreme poverty and 31 of families living in poverty are program beneficiaries.</li> </ul>
Education	<i>Short term urban evaluation:</i> <ul style="list-style-type: none"> <li>Increased enrollment rates for some age groups (e.g. 10 % points for boys at age 6).</li> <li>Increased rates of school progress (7 to 15 % points) for all ages (excluding girls 15 to 18).</li> </ul>	<i>Medium term rural evaluation:</i> <ul style="list-style-type: none"> <li>Increased years of schooling completed by most children 9 to 13 enrolled in school in 1997 (0.69 to 1.31 grades).</li> <li>Increased percentage of most children 9 to 12 enrolled in school in 1997 with adequate school progress (30.4% to 63.6%).</li> </ul>	<ul style="list-style-type: none"> <li>22 % points increase in school attendance rates in communities in the treatment group (30 % points among the poorest households).</li> <li>8.5 % points increase in passing/retention rates in communities in the treatment group (9.3 % points among the poorest households, higher impact in higher grades – 12 % points from grade four to five).</li> </ul>
Health	<i>Short term urban evaluation:</i> <ul style="list-style-type: none"> <li>16% increased in consultations children 0-5 (last 6 months).</li> <li>4% decrease in hospitalizations people older than 50 (last 12 months)</li> <li>46% decrease in anemia prevalence (children 6 to 23 months).</li> <li>32% increase in births with adequate prenatal care.</li> </ul>	<i>Medium term rural evaluation:</i> <ul style="list-style-type: none"> <li>12% increased in consultations children 0-5 (last 6 months).</li> <li>22% decrease in hospitalizations people older than 50 (last 12 months).</li> <li>Reduction in maternal and infant mortality (15% and 6%) in municipalities with more than 35% of population participating.</li> <li>26.1% decrease in anemia in girls 3 – 6 (none in boys).</li> <li>61% increase in births with adequate prenatal care</li> </ul>	<ul style="list-style-type: none"> <li>29 % points increase in children less than three years old participating in growth monitoring.</li> <li>18 % points increase in children 12 to 23 months old with complete and adequate immunizations.</li> </ul>
Nutrition	<i>Short term urban evaluation:</i> <ul style="list-style-type: none"> <li>No effect in stunting.</li> <li>7.5% increase in food consumption (7.9 in vegetable consumption).</li> </ul>	<i>Medium term rural evaluation:</i> <ul style="list-style-type: none"> <li>Decreased stunting among 2 to 6 month old babies (39.3% for females and 19.4% for males).</li> </ul>	<ul style="list-style-type: none"> <li>8 % increase in per capita annual food expenditures of beneficiary household (vs. a decrease of around 19 % for the control group).</li> </ul>
Child labor	<i>Short term urban evaluation:</i> <ul style="list-style-type: none"> <li>Decreased labor rates for half age groups (5 to 25 % points).</li> </ul>	<i>Rural areas</i> <ul style="list-style-type: none"> <li>Better results than in urban areas: 16% of under coverage and leakage rates, 100% more benefits reaching the poor than random assignment.</li> </ul>	
Beneficiaries and total budget	<ul style="list-style-type: none"> <li>5 million families</li> <li>Annual budget around 2.5 billion dollars</li> </ul>		

	<b>Costa Rica - Superemonos</b>		
Education	<ul style="list-style-type: none"> <li>• 8.7 % points increase in school attendance for children 13 to 16 years old.</li> <li>• 4.8 % points increase in students passing the school year in 2001 for children 12 to 15 years old.</li> </ul>		
Beneficiaries and total budget	<ul style="list-style-type: none"> <li>• 12,234 families</li> </ul>		